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UNIVERSITY OF MASSACHUSETTS BULLETIN

1960-1970
A Dynamic Decade

VOLUME LXII
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A

Brief

Glimpse

of Growth

and Progress

at the University

of Massachusetts at

Amherst, Boston & Worcester

in the Dynamic Decade 1960-1970

THE ANNUAL REPORT OF THE PRESIDENT
FOR 1969 – 1970

June 17, 1969

Mr. Joseph P. Healey, Chairman
Board of Trustees — University of Massachusetts
14 Winchester Road
Arlington, Massachusetts 02174

Dear Mr. Healey:

When I came to the University of Massachusetts in 1960 I set for myself ten years as the outside limit of my tenure in presidential office. I have always felt that a president makes his major contribution within his first ten years. Although there are some tasks that remain to be done, after ten years it is better that a board of trustees select a new man, one who can bring new ideas and suggest different educational paths for a university as called for in a day of dynamic social change.

For some time past I have been the senior state university president in New England. I have already held office longer than the national norm. If I may indulge in some humor currently prevalent among my presidential colleagues: "It is a good idea to quit before one falls farther behind."

I therefore write to apprise you, and through you the Board of Trustees, of my resignation as President to become effective at the end of the academic year 1969-70. I give you this notice now so that you may have ample time in which to search for my successor. Pending his arrival I shall, of course, devote my full attention and energy to the advancement of the University system in Amherst, Boston and Worcester.

My decision is based on my firm belief in what is good for the University. I resign with the highest regard for the members of the Board of Trustees and with deep appreciation for the privilege they have afforded me to lead the University during this period of rapid growth not only in size but in quality. It is hard to realize that enrollment has increased from slightly more than six thousand students in 1960 to a planned twenty-one thousand next fall.

As I have said many times, "The University is people!" In the popular mind the President gets the credit, but the truth is that any success we have achieved is due to the backing of an outstanding faculty and of a dedicated group of administrators who have worked ably as my administrative team. If there is any discredit, as President I am glad to assume that alone.

One of my great satisfactions and challenges as President has been the opportunity to work both in Boston and in Amherst with outstanding and responsible students. The University has pioneered in the involvement of students in the development of policy at all levels clear up to the Board of Trustees. We have established and will continue to develop a tripartite academic community in which students, faculty and administration work cooperatively toward the common goal of academic excellence.

I have been grateful as President for the hand of friendship extended by governors, state legislators, and state house administrators. Although our budget requests have frequently been cut and we have not received the kind of financial support which would put us in the forefront of public institutions, we have made tremendous progress. It is only because the Commonwealth started from such a low base that the very real effort of recent years has been obscured.

I would be remiss if I did not express my grave concern for the thousands of qualified applicants we must turn away each year. Without greatly increased financial support for public higher education — community colleges, technical institutes, state colleges and the University — thousands of Massachusetts youth will find the door to college slammed shut in the years just ahead, and our greatest natural resource will be lost to us.

When I leave the presidency next year I should like to return to my professional field of political science in a faculty position where I can teach and do research. This will also permit closer contact with students which I have missed. I shall continue to promote the University's welfare, albeit in a different role. I look forward to the day when the University will be truly recognized as the "People's University," and I will continue to support the Board of Trustees in bringing this dream to fruition on behalf of the youth of the Commonwealth.

Sincerely,

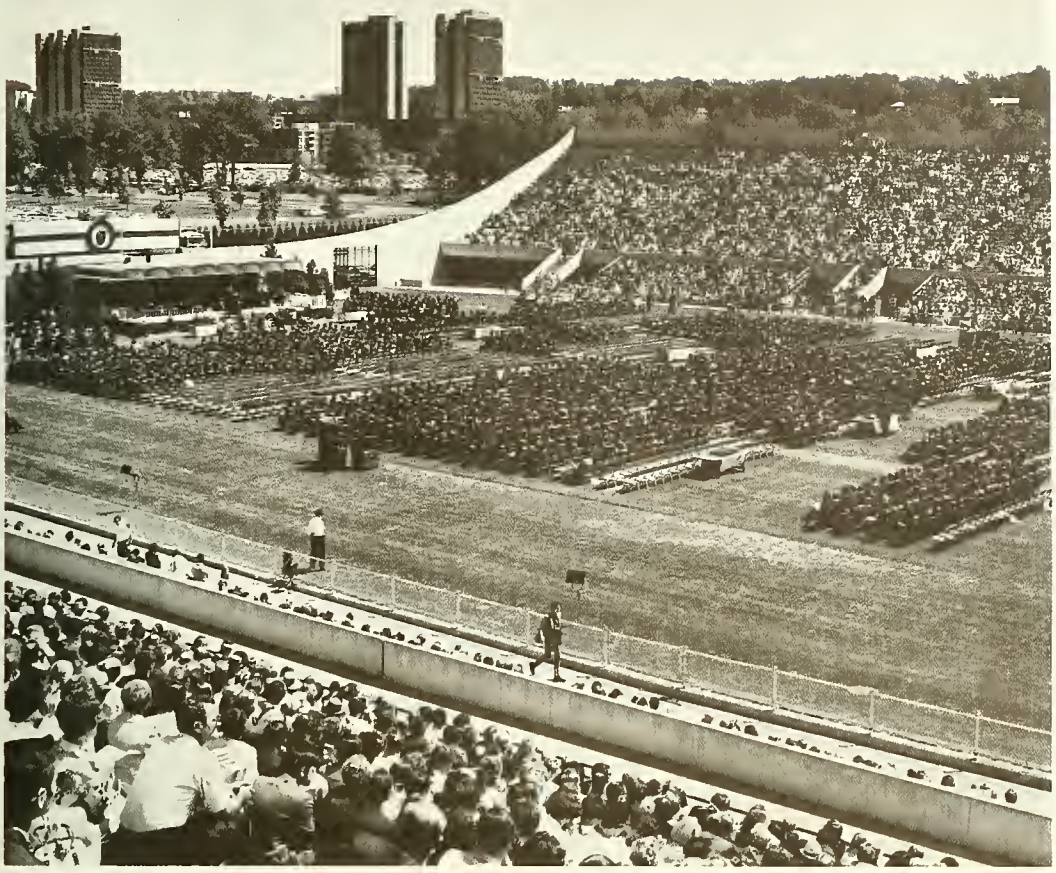
John W. Lederle
President

WITHOUT QUESTION, growth has been the dominant characteristic of John Lederle's presidency at the University of Massachusetts. Since 1960, President Lederle has directed an uncommonly impressive expansion of the Commonwealth's university: enrollments have more than tripled; physical plant has increased manifold; what he took over on a single campus now has three locations. Furthermore, most of these increases resulted from new developments, not from taking over existing projects. While such growth in the University of Massachusetts was necessary and apparent, it was John Lederle who carried it out and continued to remind us all how needed it was.

It would be a serious mistake, however, to assume that the growth which has taken place over the last decade has been in size only. President Lederle has managed a growth in the University's quality which is equally impressive. Doctoral programs multiplied, both building upon and building improvements within faculty. Faculty recruitment has been organized — successfully — on a nationwide basis. Grants for research have grown enormously; the number and variety of agencies which give them have expanded significantly.

In a word, President Lederle has brought the University of Massachusetts to the threshold of unquestioned excellence. This is a very large and very significant accomplishment. He has earned — and deserves — our heartiest thanks.

THE HONORABLE FRANCIS W. SARGENT
Governor of the Commonwealth of Massachusetts



JOHN W. LEDERLE DOCTOR OF LAWS

No one can place true value on a decade of days devoted to building a major university.

Under your leadership this institution has tripled enrollment, built seventy new buildings, added two campuses, and joined the front rank of America's institutions of public higher education.

Overriding the physical monuments to your presidency have been your constant faith in students, your commitment to good teaching and your continual advocacy of quality, low-cost public higher education for the youth of Massachusetts.

For the thousands of men and women who have been graduated from this University during your tenure, and for those yet to come, we thank you. The Lederle years will now be recorded in the history of this University as its finest decade.

I, therefore, by authority of the Board of Trustees of the University of Massachusetts, confer upon you the degree of Doctor of Laws, honoris causa, and admit you to all its rights and privileges. In token of this I present you with this diploma and invest you with the appropriate hood.

Given at Amherst, Massachusetts
May 30, 1970

Joseph P. Healey
Chairman
Board of Trustees

Intellectual interchange between faculty member and individual student continues to be stressed.

Viewing balloon-borne telescope at 1968 opening of astronomy laboratory are Dr. John D. Strong, then-Provost Oswald Tippo, and President Lederle.

During its course, the decade of 1960 – 1970 for the University of Massachusetts was difficult and demanding. In retrospect, it was a spectacular success story.

From the Fall of 1960, when John W. Lederle took over the presidency from Jean Paul Mather, until the Summer of 1970, when he relinquished it to Robert C. Wood, the University of Massachusetts passed through what might be termed an institutional adolescence. It was altered in many vital ways, passing from small to large, from one campus to three, from its first to its second century, and from adequacy to excellence. Accompanying this text are selected comments made by Dr. Lederle as the early years of the decade unfolded.

The decade saw the size of the University virtually explode. Student enrollments tripled, the number of faculty, the total operating budget, and the number of books in the library quadrupled. The century-old Amherst campus was joined by campuses in Boston and Worcester. Painfully small faculty salaries and the number of advanced degree fields were doubled. Undergraduate, research and service programs grew in number and scope.

At the same time, the University struggled successfully for legislation granting a measure of fiscal autonomy, an approach to a state-wide system, and sufficient faculty salary relief to begin national recruitment. And through it all ran the unavoidable stresses inherent in juxtaposing an immutable concern for the individual student with gigantic growing pains and the advance of computer technology.

As the University of Massachusetts grew to maturity, its aims broadened, its purview enlarged, and its outreach extended. Successive challenges and problems were transformed by time and effort into opportunities and successes. It was a decade of which Massachusetts' citizens can be proud.

The Sixties opened for the University of Massachusetts with an increased thrust for legislative and citizen support, coupled with an internal drive for qualitative improvement. New entrance requirements became effective, an Honors Program was initiated, and interdisciplinary sophomore colloquia established. The programs in Nursing

". . . these are exciting times for higher education on every campus; but for sheer excitement due to dynamic change, the University has few, if any, rivals. We are in many ways pioneers, and pioneering is always exciting." (1961)

"As educators, we should all have but one aim — and that is to make the University of Massachusetts the finest state university in the country. We don't want to make it a mere copy of the University of California, or of Wisconsin, Minnesota or Illinois. Let us not be afraid to copy good ideas, but let us also apply our best talents to innovation, to experimentation — to building the University of Massachusetts as an institution having its own integrity and identity." (1963)

"When one contemplates our rate of expansion in the next three or four years it is clear that the gears of our complex machine will frequently clash. For the number of students who are in the University this year, we have adequate classrooms but inadequate dormitories. We have a plenitude of scientific laboratories in Morrill Hall but major needs in other areas. We have a beautiful Student Union, only four years old, but it is already far too small for our student body. We have plenty of bookshelves in our new library addition, but purchasing and cataloging books so that they will be available to

Board of Trustees, Organization of 1963: seated from left: Robert D. Gordon, representing Governor Peabody; Most Reverend Christopher J. Weldon; Harry C. Solomon; Alfred L. Frechette; Fred C. Emerson; Joseph P. Healey; Dean Leo F. Redfern; Chrm. Frank L. Boyden; Pres. John W. Lederle; Alden C. Brett; John W. Haigis; George L. Pumphret; Calvin H. Plimpton; Edmund J. Croce; Hugh Thompson; Harry D. Brown; Frederick S. Troy.

Seated at left, behind table: Owen B. Kiernan; Dennis M. Crowley. Standing (l. to r.): Gilbert L. Woodside, Provost; Charles H. McNamara; and Kenneth W. Johnson, Treasurer. Members of the Board not shown: Mrs. Kathryn F. Furcolo, Miss Victoria Schuck, Ernest Hoftyzer, and J. John Fox.

Chatting informally with President Lederle in his office are students Sara Vartanian, Millbury, Shawn Fitzgerald, North Easton, and Paul Mankowsky, Millers Falls.

and Physical Education were formally established as Schools, and the new Four College Cooperative Ph.D. degree was authorized. The Student Health Services were reorganized as a new infirmary was being built. The Hampshire Inter-Library Center was transferred from Mount Holyoke College to the University, which had just doubled its library space.

During these visible improvements, the new fifteenth president of the University began working to bring together a new and efficient administrative team. The second year of his tenure saw appointment of Dr. I. Moyer Hunsberger as Dean of the College of Arts and Sciences, of Dr. William F. Field as Dean of Students, and of Dr. Leo Redfern, initially as Director of the newly-created Office of Institutional Studies.

Established in 1961 were the Research Computing Center, the Population Research Institute, and the Polymer Research Institute. The Bureau of Government Research aided in establishment of the Massachusetts League of Cities and Towns, and the School of Education began study of the subsequently successful plan to establish a girls' school in Uganda with Federal assistance. Dr. Arless A. Spielman became Dean of the College of Agriculture and Director of the Experiment Station.

Spadework was begun in depth in 1961 by President Lederle for what is generally considered to have been the most vital single aspect of the institution's subsequent growth — fiscal autonomy. Close working relationships were being built with key members of the Legislature; the press and public were made aware of the issue through the 1961 Annual Report of the President, and strong organized efforts were launched by such groups as the University Alumni and the Massachusetts League of Women Voters.

A Special Commission on Budgetary Powers, established through efforts of Senate Majority Leader Maurice Donahue, made recommendations supporting the University's stand that it should be granted fiscal authority commensurate with responsibility. Effective support was also given by Dr. Frank L. Boyden, chairman of the University's Board of Trustees, and the presidents of the private

readers cannot be accomplished simply by legislative appropriation. Given positive attitudes, however, rather than non-constructive negativism, we shall reach our goal." (1961)

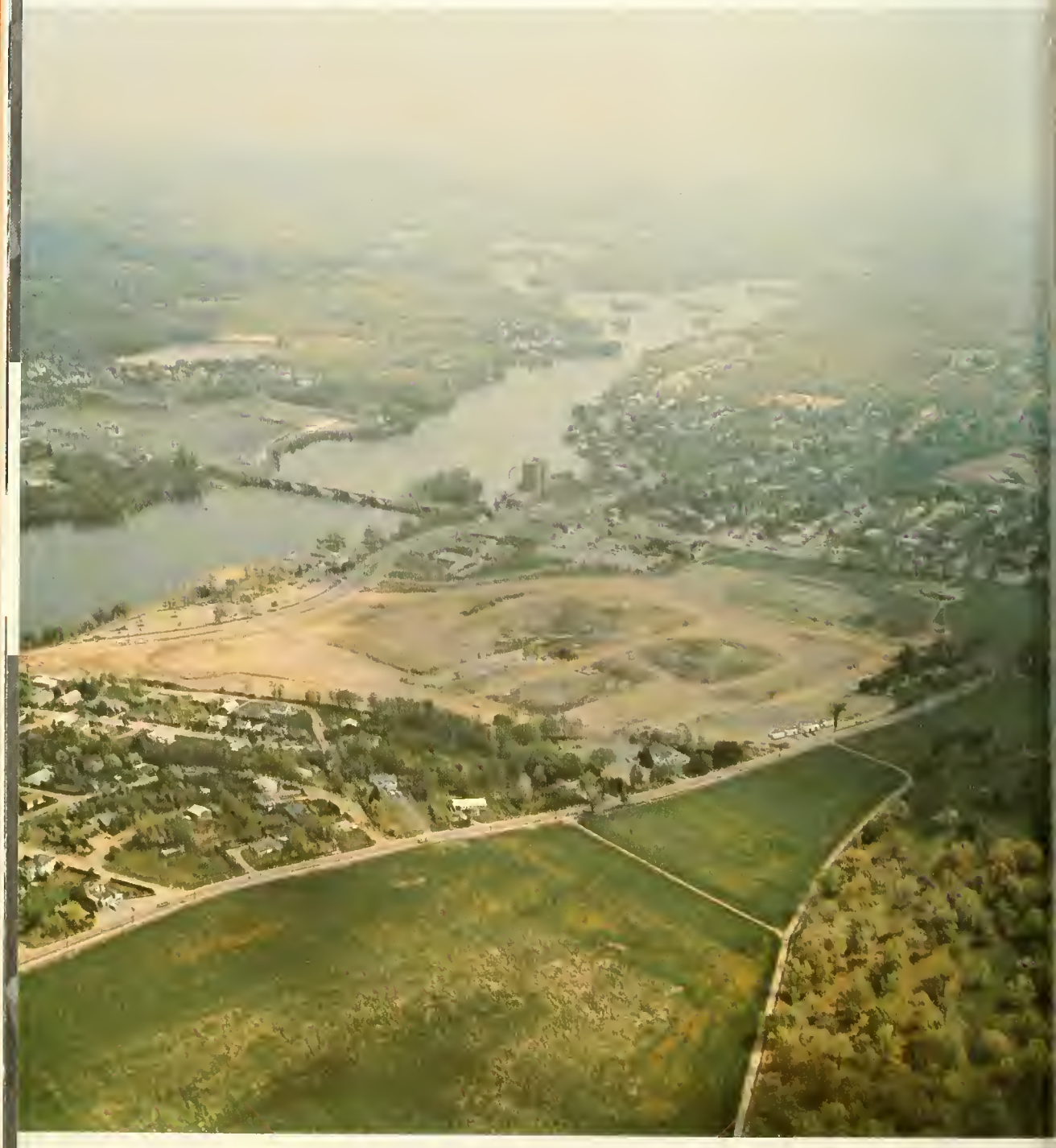
". . . Education is our greatest national resource. If we fail to tax ourselves to exploit its potential, because we prefer tail fins on our automobiles and new frost-free refrigerators in our kitchen when the old ones work pretty well, we may see the day when we have neither automobiles or refrigerators." (1961)

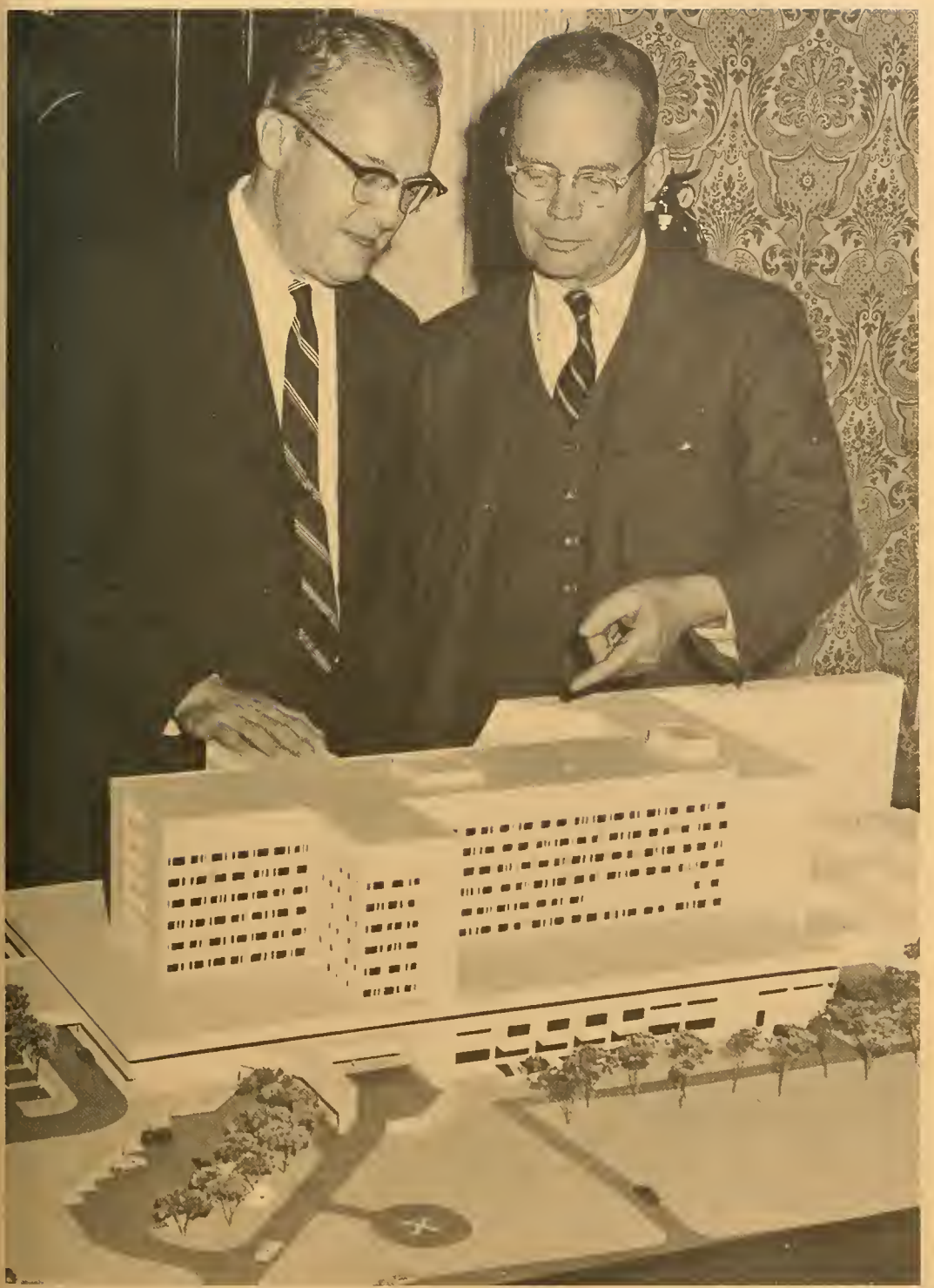
"Students, let us never forget, are the main raw material of a university. Their individual growth and development are and should be the prime focus of the entire educational enterprise. Let the University of Massachusetts continue to emphasize good teaching. Let us find and reward the good teacher." (1961)

"The University of Massachusetts is deeply concerned about stimulating its students to take an active interest in the problems of local, state and national government. Rousseau warned: 'As soon as any man says of the affairs of state: What does it matter to me? the state is lost.'

"In order that our students may understand why the state must always matter, we bring to our faculty scholars

The Medical School Site — Worcester





Model of the planned teaching hospital at Worcester is viewed by President Lederle and Dr. Lamar Soutter, Medical School Dean.

Historic signing of Fiscal Autonomy Bill by Gov. John Volpe is witnessed by Senate Pres. John Powers, House Speaker John Thompson, Senate Majority Leader Maurice Donahue, President Lederle and Dr. Frank Boyden, chairman of the Board of Trustees.

First recipient of the Distinguished Teacher of the Year Award (1962), Dr. William H. Ross bears University Mace at Commencement.

colleges and universities in the Commonwealth. The front lines of the University's thrust toward implementing fiscal autonomy were manned by Dr. Redfern, Business Manager Gerald Grady, Treasurer Kenneth Johnson and Provost Gilbert Woodside.

The fiscal autonomy bill, as passed in 1962, gave authorization to the Trustees to set professional staff salary ranges within state salary schedules, to modernize purchasing and printing procedures, to establish rules for tenure, to transfer funds within state subsidiary accounts, and to set up internal trust funds.

The University's Centennial Year, 1962 – 1963, also witnessed major progress along two other important paths — the establishment by statute of a University of Massachusetts Medical School, and the bringing of faculty salaries more closely in line with the AAUP scale through a 20 percent salary increase, the latter achieved the following year. In line with Dr. Lederle's stress on rewards for faculty excellence, the first Distinguished Teacher of the Year Award was presented.

The same year, first plans were made for a new Fine Arts Center, only this year ready for bid, and the University of Massachusetts Press was born. Dr. Edward C. Moore became Dean of the Graduate School. First principles of what was to become the state-wide University system were published in the University's Long Range Planning Report, which also foresaw a division of continuing education, implemented during Dr. Lederle's final year.

Four major appointments in 1963 – 64 rounded out the Lederle administration team. Dr. Oswald Tippo was named Provost, Robert J. McCartney became Secretary of the University and Director of University Relations, and Dr. William Tunis was appointed Dean of Admissions and Records. All three were University alumni. In the fourth shift, Dr. Redfern was named to the new post of Dean of Administration. Major administrative efforts were mounted to support the concepts of a state-wide University system, and development of a University of Massachusetts campus in Boston. Dr. Lamar Soutter was named Dean of the Medical School. In Amherst, the first experimentation with the successful residential college program was

who are expert in the field of parties and politics. Yet we don't leave this merely to be studied out of books under scholarly guidance. We also bring to our campus for extended periods of time noted practical politicians and distinguished exponents of statesmanship. We abhor the widely held view that politics is a dirty business. Through direct personal contact, we find that our students learn to appreciate and to honor the role of the politician as he works out the compromises so vital to continuation of democratic government." (1961)

"Certainly in New England, excellence in higher education has meant, by and large, our distinguished private institutions. Theirs is the long, noble and continuing tradition. But we in the public institutions find that the tide of population is increasingly sweeping us toward the forefront of educational activity. And we find more and more evidence, often submitted by the private institutions themselves, that if New England — and indeed America — is to rise to new heights of educational service for most of its people, then assuredly most of the people must turn to the public institutions for such service." (1961)

". . . We must not content ourselves with aiming at the average. I recognize that it is costly to minister to needs

Presidents of the six New England state universities, gathered in 1969, are (from left): Werner Baum, Rhode Island; Homer D. Babbidge, Jr., Connecticut; John W. McConnell, New Hampshire; Winthrop C. Libby, Maine; Lyman S. Rowell, Vermont, and John W. Lederle, Massachusetts.

A visible sign of growth — awesome stacks of textbooks for each semester.

*Enrollments**

1959 – 1969

	Fall 1959	*Fall 1969*	*Percent Increase*
Undergraduate	4,911	12,745	160
Stockbridge	327	593	81
Subtotal	5,238	13,338	155
Graduate	635	2,512	296
Total Amherst	5,873	15,850	170
Boston	—	3,517	—
Total University	5,873	19,367	230

*Based on Full-Time Equivalent. Totals by head count rose from 6,131 to 22,462 for the decade, a 266 percent increase.

Numerical Growth in Major Fields of Study

1959 – 1969

	Fall 1959	*Fall 1969*
Arts and Sciences	24	31
Agriculture	21	19
Business Administration	6	12
Education	2	2
Engineering	5	7
Home Economics	5	5
Nursing	1	1
Physical Education	3	3
Public Health	—	3
Bachelor's Degrees	67	83
Master's Degrees	38	60
Doctorates	12	46
Total Major Degree Fields	117	189

on a more individual basis, helping each student to achieve the excellence of which he is capable, but anything less means a great loss of those of superior talent and of those of lesser talent. We cannot afford such loss at this stage of our history." (1961)

"Whenever I go to alumni meetings our graduates come up and ask about some of the teachers who influenced them profoundly. Their eyes light up as they remember their idiosyncrasies, their pet phrases, their admonitions, their advice and counsel. I say to the students here today — sometimes the professors they remembered were the ones who seemed too hard and demanding. But in after years they came to realize that this very discipline and exactitude was the lesson they needed most after being brought up to adulthood in an atmosphere of parental permissiveness and teen-age domination." (1962)

"Instead of talking about corrupt government and corrupt politicians, it is high time we concentrated our talk on the corrupt private citizens who corrupt politicians. Some years ago one of my friends in the legal department of a leading auto manufacturer called me asking for suggestions for a speech the company president was scheduled to give on governmental ethics. I

New Facilities

Construction and Acquisition

1960	
Bartlett Hall	$ 2,181,125
Morrill Science Center I	1,941,020
Dickinson Hall — ROTC	468,105
Maintenance Physical Plant	627,000
Goodell Library Addition	1,940,873
Johnson House	566,530
Hills House	1,388,550
1961	
Addition — Worcester Dining Commons	504,475
1962	
Mark's Meadow Lab School	1,844,690
Morrill Science Center III	1,452,177
Infirmary	961,459
Cold Storage	641,191
Engineering & Physics Labs & Classrooms	682,187
1963	
Holdsworth Hall	1,213,340
School of Business Administration	1,412,091
Hasbrouck Laboratory Addition	1,899,019
Boyden Gymnasium	2,718,112
*Gorman House	1,019,478
*Brett House	773,200

The Amherst Campus — 1970 — looking West

1965	
Mahar Auditorium	231,117
Observatory	10,000
Mobile Classrooms, 5 @ $8,265	41,325
Orlyte Greenhouse	18,664
Kiln	14,500
*Orchard Hill Residential College (Grayson, Dickinson, Field & Webster Houses)	4,611,927
*Franklin Dining Hall	1,452,964

1966	
Engineering Building East	1,340,133
Chenoweth Laboratory Addition	1,372,637
Morrill Science Center IV	3,473,955
Coal Handling Facilities	231,764
*Stadium & Facilities Building	1,158,000
*Low-Rise Residence Halls, Southwest (Thoreau, Melville, James & Emerson Houses)	2,699,431
*Southwest Residential College Towers (Kennedy, Coolidge, J. Adams, J. Q. Adams, & Washington Towers)	11,307,100
*Hampshire Dining Hall	2,700,000

1967	
Poultry #1, 2, 3, 4, Tillson Farm	343,393
Agricultural Engineering Building	320,700
Whitmore Administration Building	2,758,334
Low-Rise Residence Halls, Southwest (Patterson, MacKimmie, Crampton, & Prince)	4,620,600
Hampden Dining Hall	2,200,000
1968	
Physical Plant (Administration & Storage)	1,347,804
*Astronomy Laboratory	205,000
Tillson Sheep Shed	11,000
Thompson Hall	2,728,640
Herter Hall	3,428,448
Biology Laboratory & Classroom, E. Wareham	211,000
Water Tank	75,000
*Low-Rise Residence Halls, Southwest (Cance, Pierpont, & Moore Houses)	3,800,000
*Berkshire Dining Hall	2,080,923
1970	
*Murray D. Lincoln Campus Center and Parking Garage	18,000,000

The Amherst Campus — 1970 — looking Northeast

Under Construction	
Graduate Research Center I	15,000,000
Tobin Hall	5,800,000
University Library	14,500,000
*Brown, Cashin, & McNamara Residence Halls	10,600,000
*North Village (Married Student Housing)	3,500,000
Total, State Funds	73,950,278
*Total, Building Authority	72,478,703
GRAND TOTAL	**$146,428,981**

Planned	
Graduate Research Center II	10,500,000
Fine Arts Center	13,800,000
Engineering Laboratory Building	18,900,000
Infirmary Addition	1,400,000
Life Science Building	24,000,000
Medical School, Worcester ($127,000,000 funded)	138,000,000
Columbia Point Campus, Boston ($130,000,000 funded)	355,000,000

*Building Authority Projects

Pres. Lederle lunches in Washington with Sen. Kennedy, Rep. Conte, and other Congressmen.

Students gathered last spring at Alumni Stadium exemplify new active rather than passive student role in University governance.

Average Faculty Salaries

(Amherst Campus Only)

	Fall 1960	*Summer 1970*
Professor	$9,942	$21,126
Associate Professor	7,636	15,926
Assistant Professor	6,360	12,579
Instructor	5,382	9,468
Average, All Ranks	7,528	15,152
Number of Faculty	315	1,031

Operating Funds Comparison

(All Campuses)

	Fiscal 1960	*Fiscal 1970*
Total Operating Funds	$13,065,845	$107,883,774
State Appropriations	9,476,498	61,186,319
Returned to State Treasurer	3,417,783	6,181,846
Net from State	6,058,715	55,004,473

Capital Outlay Comparison

(All Campuses)

	Fiscal 1960	*Fiscal 1970*
Total Capital Appropriation	$ 1,600,000	$89,800,000*

*Includes special appropriations of $50,000,000 = new Boston Campus; $19,600,000 = Medical School, Worcester.

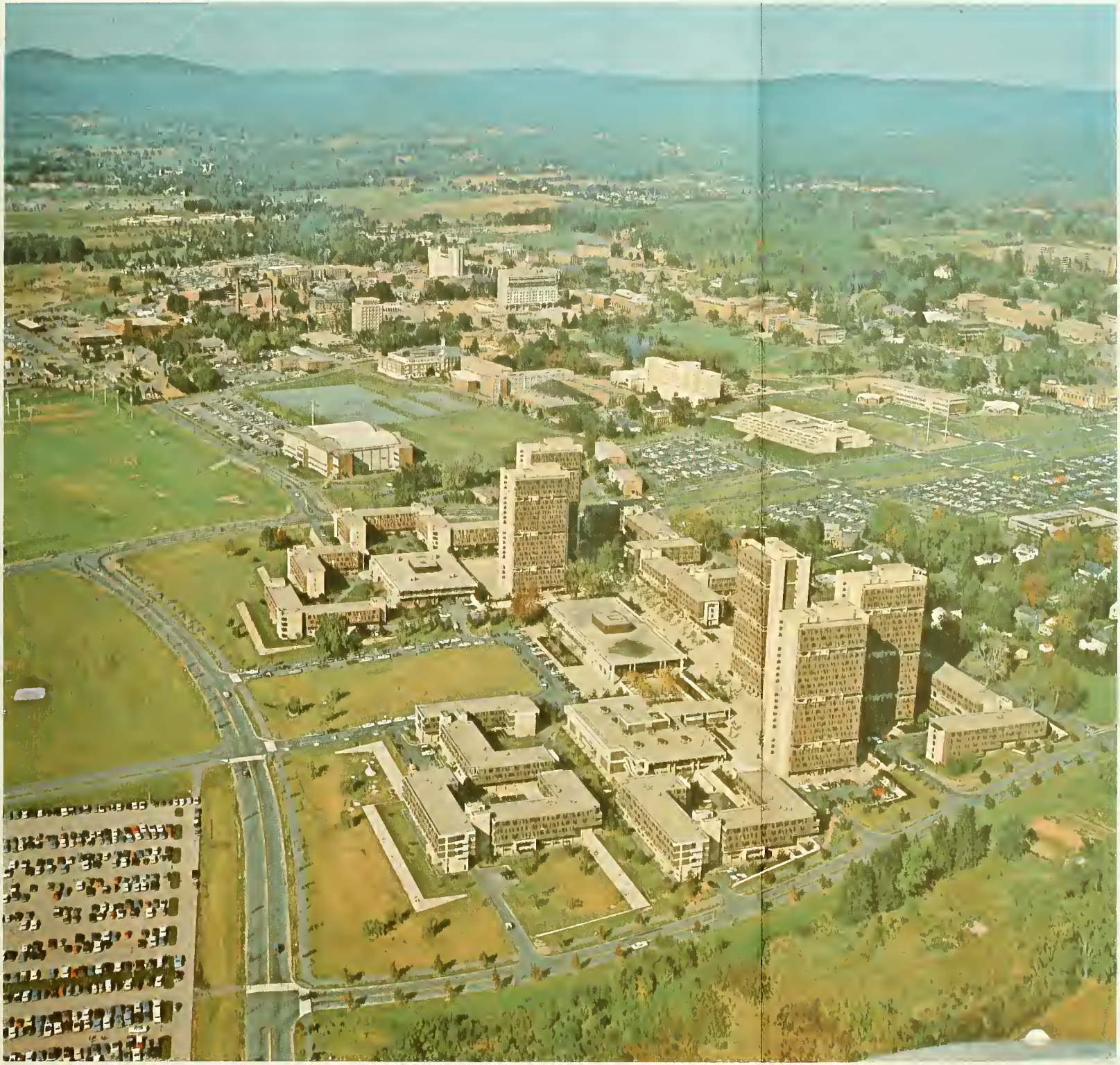
gave him a number of references and ideas. Then I concluded the conversation by saying that I would have no respect for his president if he focused exclusively on the ethics of public office holders: 'Let him remind his audience that politicians don't bribe each other. Private citizens do the bribing and deserve some of the stigma.' There is too much preaching today about governmental corruption which ignores the non-official participant. Whether in government or private enterprise, venal practice is equally reprehensible. We should be equally vehement in stamping it out.

"Ironically, one way in which we tend to corrupt our public officials, both elected and appointed, is in our failure as a society to see to it that good service is adequately compensated. In a society which has been for over a hundred years industrially oriented to the production of material goods, public service — like public education — has frequently appeared to many to be a luxury or fringe benefit to which little material rewards should be assigned. Thus we have tended to be parsimonious in salaries for public service, while being magnanimous in the high standards of integrity and service demanded of those serving us in a public capacity." (1962)

"A public official must want to communicate. He must

The Changing Face of the Amherst Campus

Aerial photographs of the University's Amherst Campus taken in 1960 (below) and in 1970 (at right) show the decade's sweeping physical changes. Below, looking southwest, Johnson House was under construction (lower left corner), while open fields along upper edge of photo give no hint of high-rise residences to come. At right, view toward northeast shows ten-year expansion, with Southwest Residential College in foreground.



Distinguished Architects For a Decade of Growth

(Listed with Selected Projects)

Hideo Sasaki *of Sasaki, Dawson, DeMay associates, Master Planning Consultants to Trustees*

Pietro Belluschi, *Architectural Consultant to Trustees*

Breuer & Beckhard
Campus Center

Campbell, Aldrich, Nulty
Graduate Research Center

Coletti Brothers
Herter Hall & Tobin Hall

Drummey Rosane Anderson
Engineering Laboratory Building

Goody & Clancy
Infirmary Addition

Vincent G. Kling & Associates
Life Science Building

Per Neylen
Married Student Housing

Roche & Dinkeloo
Fine Arts Center

Skidmore, Owings & Merrill
Stadium

Edward Durell Stone
Library

Hugh Stubbins
Southwest Residence Area

J. C. Warnecke & Associates
Brown, Cashin & McNamara
Residence Halls

Paul Weidlinger
Stadium

Dr. and Mrs. Lederle are flanked by Gov. John A. Volpe and Chrm. George L. Pumphret of the UM Building Authority at dedication of Massachusetts Alumni Stadium in 1966.

A Phi Beta Kappa Chapter was established on the Amherst campus in 1964 – 65.

Watching the Redmen on the gridiron. Behind Dr. Lederle on either side are Gov. Endicott Peabody and the Governor's mother; beside him are his daughter Pamela and Mrs. Lederle (left).

begun at the new Orchard Hill facility under a Danforth grant, and the first students were admitted under the now-famous swing-shift program, designed by President Lederle to allow full year-round use of University facilities.

A substantial breakthrough on two fronts was made in 1964–65, with enactment by the Legislature of the provisions of the Massachusetts Higher Education Plan, and realization of the plans for the University of Massachusetts at Boston. During that fiscal year, Dr. John Ryan was named the first Chancellor of the University at Boston. Preliminary planning continued for the Medical School in Worcester. Also in 1964, the University began its continuing cooperative agricultural education effort with the African nation of Malawi, under auspices of the Agency for International Development.

Based on the Harrington-Willis Report which the University Trustees had endorsed four months earlier, the Massachusetts Higher Education Plan as passed in June, 1965, set up and defined a state-wide University system, a state college system, and a community college system. These existing segments of Massachusetts' educational enterprise were placed under coordination of a newly created Massachusetts Board of Higher Education, with an Advisory Council on Education appointed by the Governor. Board membership consisted of seven members nominated by the Advisory Council, and one member each from the University's Board of Trustees and the Boards of State Colleges, Community Colleges, and Technical Schools and Institutes. Rigid control was avoided in structuring the new body, while new opportunity was provided for cooperative growth.

New arms for expanded University outreach created at Amherst during 1964–65 included the Labor Relations and Research Center, the Water Resources Research Center, and the Cooperative School Service Council in the School of Education. The same year, the University was elected to national membership in Phi Beta Kappa.

Authorized in June, 1964, the University of Massachusetts at Boston opened its doors to 1200 freshmen in September, 1965. The swift acquisi-

want to go out and see for himself. He must believe that by listening, not just talking, by seeking criticism of his program, not merely corroboration of its efficacy, he will best do his job. There is no place for the thin skinned. Two-way communication is the way of democracy. There must be a constant struggle against ennui, against the temptation to sit in our own offices by day and sleep in our own beds each night. We must not assume that the era of personal attention is over." (1962)

"Will we become a massive educational machine spewing out graduates according to the best principles of standardized packaging? Will the role of teaching become similar to that of a cog in a machine, performing in non-human fashion a rigidly prescribed function? Or will we somehow preserve the essential humanity that must mark our educational activities if what we purport to admit to college is a human being in the first place?" (1962)

"As we grow in size, it is important that we understand the prime role of a university . . . This role must be devoted to the individual, to his growth as a thinking and humane being, of intrinsic worth and significance to all society.

"Expansion of our educational community — rapid as it is

Typical of many of the decade's dedications was this in 1969 for Herter Hall. With Pres. Lederle are Mrs. Christian A. Herter and Ambassador J. Graham Parsons, representing the State Department.

Dean of Administration Leo Redfern (left) and Dr. Lederle answer questions posed in Washington in 1967 by Reps. Edward P. Boland and Thomas P. O'Neill, Jr. (right).

tion of the temporary site and facilities, and the excellent faculty and staff, remain one of the notable educational achievements of the decade.

During the second half of the decade, strong emphasis on University relations through news and publications — combined with the massive public awareness generated by the struggles over fiscal autonomy and the Boston and Worcester campuses — created a favorable climate for additional salary legislation and an adequate operating budget despite great pressures for further cuts. And through it all, the University continued to be granted impressive sums in capital outlay for the kind of expansion the state's needs demanded.

Another thread running through the decade, with the emphasis allowed by salary legislation, was the improvement of the overall academic structure by Provost Tippo, particularly that accomplished in the College of Arts and Sciences with the assistance of Dean I. Moyer Hunsberger. Fiscal autonomy aided immeasurably in allowing these improvements, accomplished in a dynamic manner with a minimum of friction.

Faculty recruitment was given additional help in 1966 by Legislative passage of the Salary Relief Bill, strongly supported by both the University and the new Board of Higher Education. It provided for salaries outside the regular scale for approximately one percent of faculty and certain academic administrators, allowing for competitive hiring of a number of internationally known teacher-scholars.

Special emphasis was placed on two projects in 1966: acceleration of the expansion of the University's library resources, and further implementation of the residential college concept to combat the negative aspects of greatly increasing size. The same year, the first Associate Alumni Award for outstanding scholarship was presented, and academic programs under University auspices were inaugurated in England, Germany, and Italy.

A major restructuring of Student Personnel Services was accomplished at Amherst in 1966–67, consolidating all student activities and residence hall programs under the new position of associate dean of students, and beginning a program involv-

and attended by mud and noise and confusion — can make us feel that we are dedicated to pandemonium rather than to this high aim. But it is precisely when we experience all this stress and agony of accelerated growth that we must be all the more aware of the centrality of the individual in what we are striving to do." (1962)

"Respect for the individual is one of the hallmarks of a democratic society. Protection of the rights of the individual is essential, yet it is, I feel, a passive safeguard. I would hope the concern of society for individual dignity would be exhibited in a positive fashion as well. By this I mean providing the opportunity for the fullest development of the talents, skills and intelligence of each member of society. This is a very fundamental purpose of education. This is the reason, I believe, that American education is an inherent part of the democratic process." (1963)

"We must always keep in mind that, despite the sheer numbers that will be involved in education, ultimately we are dealing with the individual student and his search for fulfillment as a human being.

"There is much pressure to measure the effectiveness of American education in terms of success in reaching the moon, in terms of techno-

Dr. Lederle, always a Redmen booster, stressed educational benefits of sports.

Students and legislators engaged in important dialogue on Legislators' Day 1970.

ing the counseling staff in selection and training of residence hall counselors. The University administration developed and refined its methods for dealing with student dissent.

Also established during the year were the College of Arts and Sciences Information and Advising Center (CASIAC), and a Center for International Agricultural Studies. Closed-circuit television use was improved in the School of Education, a Project Themis award opened interdisciplinary University work in deep-sea submersibles, and the Commonwealth Technical Resource Service (COMTECH) was established. Dr. Kenneth G. Picha was named Dean of the School of Engineering.

Two new overseas programs were initiated in 1967–68, in Spain by the University at Amherst and in France by the University of Massachusetts at Boston. A remote-access time-sharing computer program was begun at Amherst, and a new admissions program approved for students from disadvantaged backgrounds. The School of Education, undergoing a thorough reorganization under new Dean Dwight W. Allen, was selected as one of nine institutions in the nation to develop a model elementary teacher education program. Dr. Wendell R. Smith was named Dean of the School of Business Administration.

In 1968–69, the administration strengthened its urging that an annual growth factor be built into the operating budget, rather than face the prospect of cutting back on the 1500 new students per year quota set at Amherst. In an era of generally tight money, however, the Fiscal 1970 operating budget posted a decrease of $18 per student, causing considerable retrenchment including a shortening of the successful Summer Session from 12 to six weeks' duration.

For the Medical School in Worcester, Federal fund applications totalling $35 million were approved and sufficient state funds provided to allow construction of the medical science building and planning of the teaching hospital. In Boston, land acquisition was begun after acceptance of Columbia Point as a permanent site of a 15,000-student University of Massachusetts at Boston.

logical development, and in terms of the amount of money that graduates can make. But let us never forget that the real measure of our success for our educational system lies in its ability to develop individual initiative, self-reliance, and self-fulfillment in each student, regardless of race, creed, color or religion. That is the real test and the real measure of education." (1963)

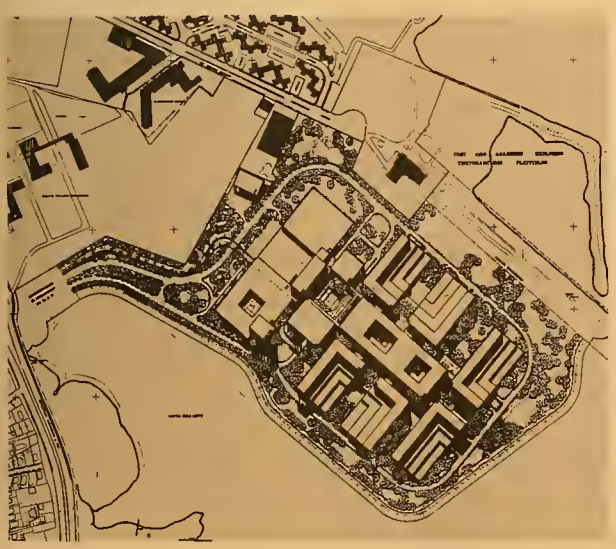
"I don't profess to be a prophet, and yet I venture the opinion that our greatest challenge will be to produce, on the broadest possible scale, a modern form of the Classical Greek concept of the citizen — the enlightened, fully participating citizen. Combining within himself a spirit of continuing learning and a sense of active participation, such a person measures the value of his life and work in terms of an increment, in terms of intellectual attainments over and above those required for earning a paycheck and in terms of cumulative contributions to the near and far communities around him." (1963)

"As we begin studying Massachusetts education under the leadership of the Master Plan Study Commission appointed to this task, I would urge that the bedrock from which we start be quality, the highest possible quality, and not an unenlightened prudence and parsimony.

The New Boston Site — Columbia Point

Gov. Francis W. Sargent visits Dr. Lederle in latter's office.

Planned buildings of UM/Boston at Columbia Point, with Morrissey Boulevard at far left and Mt. Vernon Street at top, include 14 major structures on 90 acres, with a target of 1980. The 15,000-student facility is shown in architect's conception. Approximately 2,500 commuting students are envisaged at each of six interrelated "colleges."



The attempt to cut corners in this very serious business of education in the latter 20th century can bring us to disaster as far-reaching as any experienced in our history." (1962)

"Government, and its services, are not merely restrictive or police functions. I prefer to conceive of government as a means for cooperative action in those areas of life where individually or privately we are unable to cope effectively with major problems.

"The attitude that government is a negative and policing agency adversely affected the University when I first came here five years ago. Initiative to meet the truly horrendous educational challenges of the Sixties was blunted by the prevailing need to get clearance upon clearance from State House functionaries for practically every management decision. Bureaucrats were, in effect, by action or by inaction, making educational policy and operational decisions for which they were untrained and for which they were not generally held accountable by the public.

"Morale at the University was low under this deadening system. The cumbersome red-tape in which the University and other educational institutions were enmeshed was notorious. Recruitment of quality staff had come to a virtual standstill. And, I

Flanking Dr. Lederle at his retirement testimonial given by the General Court in the House Chambers in Boston are Maurice A. Donahue, Senate President, and David M. Bartley, Speaker of the House.

In Amherst, 125 culturally deprived students were enrolled under the new program of the Committee for the Collegiate Education of Black Students, supported by the Legislature, the Ford Foundation, and the University at Amherst's Student Senate.

Also in 1968–69, Dr. Lederle announced his intention to resign in June 1970. During the year several other resignations took place. Dr. Frank L. Boyden resigned the chairmanship of the Board of Trustees, Dean of Administration Redfern accepted the presidency of Keene State College in New Hampshire, and Dr. Hunsberger resigned as Dean of the College of Arts and Sciences. Dr. Ryan resigned as Chancellor of the University of Massachusetts at Boston and was succeeded by Dr. Francis L. Broderick. Dr. Moore resigned as Dean of the Graduate School, and the following February was named Chancellor of the Board of Higher Education. Dr. Marion Niederpreum resigned as Dean of the School of Home Economics, and was succeeded by Dr. Helen G. Canoyer.

In October 1969 the University Trustees approved a plan for system-wide reorganization, defining the relationships of the component parts and establishing a central administration separate from each campus. In February 1970, Provost Tippo was appointed Chancellor of the University at Amherst. Secretary McCartney and Treasurer Johnson were absorbed into the system-wide office as Dr. Wood was named the University's 16th president at the close of Fiscal 1970.

On balance, it was an unprecedented decade. Without furor or flamboyance, the University administration successfully rode the breaker of growing need for public higher education despite early post-sputnik reaction against the humanities, and later curtailment of Federal assistance combined with a groundswell known as the taxpayers' revolt. Despite it all, the growth in support for public higher education has been most impressive.

As the majority of University students continue to come from families whose incomes cannot cover the full cost of attending college, Massachusetts may view with pride the passage of ten years with no increase in tuition at the state University.

might add, so widespread was knowledge of this sorry situation that most of the letters which I received upon my appointment as President were commiserative rather than congratulatory.

"Fortunately, the Governor and General Court sensed the need for creating a more efficient method of managing our educational institutions. The need, basically, was to release energy and initiative to meet the educational crisis thrust upon us. The result was the Fiscal Autonomy Act of 1962.

"Red tape and restrictive regulations were replaced by vesting in the Board of Trustees authority commensurate with their responsibility. This does not mean a blank check was issued to the University. It means the University must justify every dollar it requests from the State and account fully for every dollar appropriated to it. The University is subject, and properly, to detailed audits and must render complete reports on its fiscal and management operations.

"But there is more to fiscal autonomy than requiring the University to justify its level of support and to assure legal accountability. The real importance of fiscal autonomy was to place responsibility for University management where it squarely belongs — in the hands of the Board of Trustees and its responsible administrators." (1965)

Report of the Treasurer

Summary of Operating Funds
Fiscal Year Ending June 30, 1970

Where the Operating Dollar Comes From . . . Amherst, Boston, Worcester

	Total Amount	*Percent of Total*
Funds from University Receipts:		
Tuition	$ 4,275,216.06	3.96
Residence Halls	548,748.76	.51
Sales and Services	1,357,880.91	1.26
Total University Receipts	6,181,845.73	5.73
Net Funds From Taxpayers of the Commonwealth	55,004,473.39	50.98
Sub-Total	61,186,319.12	56.71
Federal Government	12,345,987.69	11.45
Student Activities	2,130,503.76	1.98
Student Aid Funds	225,264.75	.21
Student Loan Funds Notes Receivable	2,893,377.29	2.68
Gifts and Grants	4,474,523.27	4.15
Auxiliary Enterprises	20,730,893.40	19.21
Endowment Income	161,810.44	.15
Agency Funds	3,735,094.21	3.46
Total Funds Available	$107,883,773.93	100.00

How It Is Spent . . . Amherst, Boston, Worcester

	Total Amount	*Percent of Total*
Instruction		
State Funds	$ 29,554,927.36	31.63
Federal Funds	2,787,355.00	2.98
Gifts and Grants	466,558.91	.50
Total Instruction	32,808,841.27	35.11
Library	3,065,012.99	3.28
Research	7,084,475.49	7.58
Public Service		
Agricultural Extension	1,928,015.64	2.06
State Agricultural Control Services	468,670.48	.50
Operation of Plant and Space Rentals	11,419,830.75	12.22
Administration	4,524,852.49	4.84
Student Service	1,813,643.51	1.94
Scholarships	1,844,293.44	1.97
Student Loan Funds Notes Receivable	3,018,334.96	3.23
Student Activities	2,358,591.22	2.53
Auxiliary Enterprises	18,178,680.06	19.45
Agency and Miscellaneous	4,939,752.81	5.29
Total Funds Used	93,452,995.11	100.00
Balance Carried Forward (Restricted Funds*)	14,430,778.82	
Total Funds Used and Balances	$107,883,773.93	

*Balances, restricted funds, beginning of report year, $8,056,018.01

"There is a great tendency, I am afraid, to categorize educational experiences. Students, for instance, often speak of their education in terms of individual courses or teachers.

To me, a university education is the totality of four years of varied experiences. All learning is not in the classroom. Look at the variety of enriching experiences available in the residential colleges. The highlight of a day might be a brief visit to an art exhibit, an evening of relaxation listening to the University Symphony, or a furious debate in the Hatch on a moral or political issue. Each is educational in a different way.

The opportunity to probe the mind of an exciting professor in a private conversation in his office can be extremely stimulating. What makes a professor tick? What is he like personally when separated from his notes in the lecture hall?

The disciplined mind of a halfback waiting behind his blockers until the last minute, the trenchant presentation of student senators pushing for a new program, a magazine editor editing copy and laying out pictures, are all educational experiences that are almost totally unaffected by what goes on in the classroom. A truly valuable educational experience may be simply learning to live harmoniously with others in a residence hall.

Our bright young students are all unique. They come from the cities and the farms, from Massachusetts, from other states and from overseas. Some are well-to-do; others have a tough time making ends meet. The point is that they rub off on one another. Each has something to contribute and something to receive from his daily contacts. When we share our ideals, beliefs, knowledge and experiences through books, professors, classrooms, residence halls, or extracurricular activities in a balanced way, we are participating fully in education and developing our individual personalities into The Whole Man."

JOHN W. LEDERLE

1968

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FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, 1970

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Audit

In accordance with state law, all accounts of the University are examined each year by the State Auditor. The last audit covered the period of this report from July 1, 1969 to June 30, 1970.

Balance Sheet as of June 30, 1970

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
STATE FUNDS					
Appropriation Balances held by State Treasurer:					
Maintenance	$ 447,139.91		Amherst Appropriation Balance	$ 640,870.43	
Other Maintenance	356,842.74		Boston Appropriation Balance	6,782,358.06	
Capital Outlay	7,295,845.47		Worcester Appropriation Balance	676,682.65	
Federal Grant and State Technical Service	83.02				
		$ 8,099,911.14	Total Appropriation Balance		$ 8,099,911.14
Accounts Receivable		39,222.23	Funds Due State Treasurer		39,222.23
Supplies Inventory		97,487.04	Expendable Supplies		97,487.04
		$ 8,236,620.41			$ 8,236,620.41
FEDERAL FUNDS					
Cash-First National Bank of Amherst-Checking Account	$ 405,604.02		Balance Federal Appropriations	$ 371,845.61	
Notes Receivable-Nat'l Defense Student Loans	2,885,429.04		National Defense Loan Funds	2,925,052.09	
Notes Receivable-Nursing Loan Program	84,598.96		Nursing Student Loan Program	78,475.82	
			Unpaid Check Fund	278.50	
		$ 3,375,632.02			$ 3,375,632.02
ENDOWMENT FUNDS					
Income-First National Bank of Amherst-Checking Account	$ 74,191.24		Income on Investments-Amherst	$ 96,960.99	
Income-First National Bank of Amherst-Trust Department	12,826.47		Income on Investments-Boston	54.86	
Income-Amherst Savings Bank-Savings Account	10,000.00		Unpaid Check Fund	1.86	
		$ 97,017.71	Total Income on Investments		$ 97,017.71
Principal-First National Bank of Amherst-Checking Account	5.75		Principal of Fund-Amherst	1,146,508.54	
Principal-First National Bank of Amherst-Trust Department	28,143.62		Principal of Fund-Boston	1,354.47	
Principal-Amherst Savings Bank	2,531.79		Reserve for Profit & Loss on Pooled Investments	110,645.19	
Principal-Pool Investments-Securities	1,072,455.30				
Investments in Land	152,905.40				
Unamortized Premium on Pool Investments	2,466.34				
		1,258,508.20	Total Principal		1,258,508.20
		$ 1,355,525.91			$ 1,355,525.91

Balance Sheet as of June 30, 1970

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
U OF M TRUSTEE, U OF M BUILDING AUTHORITY					
First Project-First National Bank of Amherst	$ 598.15		First Project-Maintenance & Operating Account	$ 568.15	
			First Project-Unpaid Check Fund	30.00	
Second Project-First National Bank of Amherst	70,626.55		Second Project-Maintenance & Operating Account	70,596.55	
			Second Project-Unpaid Check Fund	30.00	
Fourth Project-First National Bank of Amherst	31,669.17		Fourth Project-Maintenance & Operating Account	31,639.17	
			Fourth Project-Unpaid Check Fund	30.00	
Sixth Project-First National Bank of Amherst	2,086.58		Sixth Project-Maintenance & Operating Account	2,086.58	
Eighth Project-First National Bank of Amherst	4,533.11		Eighth Project-Maintenance & Operating Account	4,533.11	
Tenth Project-First National Bank of Amherst	36,290.15		Tenth Project-Maintenance & Operating Account	36,290.15	
		$ 145,803.71			$ 145,803.71
TRUST & AGENCY FUNDS					
Operating Accounts:			Amherst-Federal Fellowships	$ 31,437.96	
Cash on Hand	$ 36,927.10		Amherst-Miscellaneous Fellowships	76,685.49	
First National Bank of Amherst	1,116,240.68		Amherst-Scholarships	126,407.14	
First National Bank of Boston	134,192.40		Amherst-Auxiliary Enterprises	2,127,447.32	
State Street Bank & Trust Company	8,694.20		Amherst-Clearing Accounts	(106,081.00)	
Variable Interest:			Amherst-General Purpose Fund	1,255,636.15	
First National Bank of Boston	1,297,523.54		Amherst-Gifts and Grants Pending Trustee Action	4,450.02	
Common Stock:			Amherst-Library Funds	9,783.54	
84 shares Ocean Spray Cranberries, Inc.	2,100.00		Amherst-Miscellaneous Service Fund	349,152.43	
Preferred Stock:			Amherst-Student Program	435,360.58	
62 shares Ocean Spray Cranberries, Inc.			Amherst-Sponsored Research	188,035.72	
4% preferred	1,240.00		Amherst-Faculty Research	39,339.04	
Government Bonds & Notes:			Amherst-Non-Profit Organizations & Foundations	233,671.11	
300,000 Federal Home Loan Banks			Amherst-Federal Grants & Contracts-Training	16,207.00	
8.60's due 11/26/71	300,000.00		Amherst-Federal Grants & Contracts-Facilities	15,576.00	
300,000 Federal National Mortgage Assoc.			Amherst-Federal Grants & Contracts-Equipment	(8,698.55)	
8.20's due 7/12/71	300,000.00		Amherst-Federal Grants & Contracts-Other	83,736.23	
250,000 Federal National Mortgage Assoc.			Amherst-Federal Grants & Contracts-Research	215,018.13	
7.75's due 3/11/74	250,000.00		Total Amherst Trust Funds		$ 5,093,164.31
320,000 Federal National Mortgage Assoc.					
8.45's due 10/12/71	320,850.00		Boston-Scholarship	10.00	
400,000 Federal Intermediate Credit Bank			Boston-Auxiliary Enterprises	27,038.61	
8.75's due 9/1/70	401,062.50		Boston-Clearing Accounts	8,694.20	
Certificate of Deposits:			Boston-General Purpose Funds	70,869.40	
National Shawmut Bank of Boston 6.25%	500,000.00		Boston-Student Programs	95,188.29	
National Shawmut Bank of Boston 7.50%	500,000.00		Boston-Non-Profit Organizations & Foundations	15,037.04	
Union National Bank of Lowell 7.50%	100,000.00		Boston-Federal Grants & Contracts-Training	(777.50)	
			Total Boston Trust Funds		$ 216,060.04

Balance Sheet as of June 30, 1970

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
			TRUST & AGENCY FUNDS (Continued)		
90 Day Notice Saving Accounts:			Worcester-General Purpose Funds	$ 16,021.21	
Amherst Savings Bank	$ 120,576.74		Worcester-Library Funds	125.00	
Bay State Savings Bank	25,000.00		Total Worcester Trust Funds		$ 16,146.21
Berkshire County Savings Bank	3,377.48				
Easthampton Savings Bank	35,000.00		Total Trust Funds		$ 5,325,370.56
Fall River Five Cent Savings Bank	25,000.00				
Lynn Institute for Savings	25,000.00				
New Bedford Institute for Savings	26,313.50				
Springfield Five Cent Savings Bank	25,000.00				
Union Warren Savings Bank	25,000.00				
Ware Savings Bank	34,190.73				
Woronoco Savings Bank	25,000.00				
Savings Accounts:					
East Cambridge Savings Bank	16,444.37				
Provident Institution for Savings	15,000.00				
Total Cash & Securities		$ 5,669,733.24	Amherst-Agency Funds	$ 277,555.51	
Advances from State Treasurer		592,255.18	Amherst-Advances by State Treasurer	592,255.18	
Notes Receivable		50,861.63	Amherst-Student Loan Funds	117,668.80	
					$ 987,479.49
		$ 6,312,850.05			$ 6,312,850.05
			PLANT FUNDS		
Land		$ 5,470,580.00	Net Investment in Amherst Plant		$ 99,408,985.16
Buildings		60,664,780.00	Net Investment in Boston Plant		5,313,287.00
Improvements other than Buildings		15,996,552.16	Net Investment in Worcester Plant		553,424.00
Equipment		23,143,787.00			
		$105,275,696.16			$105,275,696.16
Total Assets		$124,702,128.26	Total Liabilities, Reserves and Fund Balances		$124,702,128.26

Summary of Receipts, Transfers and Balances

I. State Appropriation			
General Maintenance			
Amherst	$40,525,650.00		
Boston	6,493,979.00		
Worcester	909,553.21		
Sub-Total		$47,929,182.21	
Other Maintenance			
Amherst	$ 1,910,699.62		
Boston	915,000.00		
Worcester	70,000.00		
Sub-Total		2,895,699.62	
Capital Outlay			
Amherst	$ 1,029,255.71		
Boston	8,938,682.46		
Worcester	456,160.09		
Sub-Total		10,424,098.26	
Total		$61,248,980.09	
Less: Balances Reverted to State Treasurer			
Amherst	$ 22,919.03		
Boston	39,741.94		
		62,660.97	
Net Total - State Appropriation			$ 61,186,319.12
II. Federal Appropriation			
Balance, July 1, 1969		$ 288,832.06	
Current Year Receipts		2,421,314.78	
Total Federal Appropriation			2,710,146.84
III. Endowment Income			
Balance, July 1, 1969		$ 98,160.32	
University Income - Amherst		59,267.46	
Boston		36.26	
State Income		4,346.40	
Transfers		42,046.48	
Total Income			203,856.92
IV. Student Loan Funds			
Balance, July 1, 1969		$ 2,893,377.29	
Interest Income & Additions		237,896.92	
Total		$ 3,131,274.21	
Less: Loans Cancelled		12,632.17	
Net Total			3,118,642.04
V. U of M Trustee for U of M Building Authority			
Balance, July 1, 1969		$ 475,530.69	
Current Year Receipts		4,684,959.71	
Transfers		1,353,610.09	
Total			6,514,100.49
VI. Trust & Agency Funds			
Balance, July 1, 1969		$ 4,481,493.83	
Current Year Receipts:			
Amherst	$40,849,337.57		
Boston	331,890.33		
Worcester	3,919.65		
Sub-Total		41,185,147.55	
Transfers:			
Amherst	$ 18,666.14		
Boston	77,569.26		
Worcester	45,166.61		
Sub-Total		141,402.01	
Total			45,808,043.39
Total - Receipts, Transfers, and Balances			$119,541,108.80

Summary of Expenditures, Transfers and Balances

	Amherst	Boston	Worcester	Total
I. State Appropriation				
Administration	$ 2,975,676.09	$ 765,855.95	$ 558,386.97	
Instructor	28,554,031.25	4,300,544.08	10,073.47	
Experiment Station	1,416,811.99	-0-	-0-	
Extension Service	773,252.26	-0-	-0-	
Control Service	468,670.48	-0-	-0-	
Operation of Plant	6,325,487.17	1,391,282.06	-0-	
Sub-Total	$40,513,929.24	$ 6,457,682.09	$ 568,460.44	$ 47,540,071.77
Other Maintenance	1,711,645.24	636,554.97	70,000.00	2,418,200.21
Capital Outlay	576,241.39	2,431,324.40	120,570.21	3,128,136.00
Total State Appropriation Expenditure	$42,801,815.87	$ 9,525,561.46	$ 759,030.65	$ 53,086,407.98
Balance - State Appropriation, June 30, 1970	640,870.43	6,782,358.06	676,682.65	8,099,911.14
Total	$43,442,686.30	$16,307,919.52	$1,435,713.30	$ 61,186,319.12
II. Federal Appropriations				
Expenditures	$ 2,338,301.23			
Balance, June 30, 1970	371,845.61			
Total				2,710,146.84
III. Endowment Income				
Expenses - Amherst	$ 64,794.59			
Transfers - Amherst	42,046.48			
Balance, June 30, 1970	97,015.85			
Total				203,856.92
IV. Student Loan Funds				
Amherst, June 30, 1970 Balance	$ 3,114,396.71			
Boston, June 30, 1970 Balance	4,245.33			
Total				3,118,642.04
V. U of M Trustee for U of M Building Authority				
Expenditures	$ 5,014,686.69			
Transfers	1,353,610.09			
Balance, June 30, 1970	145,803.71			
Total				6,514,100.49
VI. Trust and Agency Funds				
Revolving Accounts - Expenditures	$36,226,483.15	$ 339,821.52	$ 40,746.80	
Transfers	121,861.01	-0-	-0-	
Agency Accounts Expenditures	3,476,204.84	-0-	-0-	
Sub-Total	$39,824,549.00	$ 339,821.52	$ 40,746.80	
Balance, June 30, 1970	5,370,719.82	216,060.04	16,146.21	
Total	$45,195,268.82	$ 555,881.56	$ 56,893.01	45,808,043.39
Total - Expenditures, Transfers and Balances				$119,541,108.80

State General Maintenance Appropriation

Comparative Statement of Expenditures by Year

Amherst - Boston - Worcester

By Budgetary Division for all Campuses

Division	1968 Amount	1968 % of Total	1969 Amount	1969 % of Total	1970 Amount	1970 % of Total
Administration	$ 3,303,339.12	9.57	$ 3,461,063.91	8.81	$ 4,299,919.01	9.04
Instruction	23,504,659.24	68.05	26,753,462.62	68.12	32,864,648.80	69.13
Extension Service	597,729.74	1.73	626,625.64	1.60	773,252.26	1.63
Experiment Station	919,421.97	2.66	1,184,924.24	3.02	1,416,811.99	2.98
Control Service	379,775.24	1.10	374,404.22	.95	468,670.48	.99
Operation of Plant	5,834,735.52	16.89	6,871,132.54	17.50	7,716,769.23	16.23
Total	$34,539,660.83	100.00	$39,271,613.17	100.00	$47,540,071.77	100.00

By Subsidary Account for all Campuses

Code No.	Account	1968	1969	1970
01	Salaries	$19,201,108.47	$21,720,679.98	$34,966,670.49
02	Salaries, Other	5,676,716.89	6,429,341.55	594,187.63
03	Service, Non-Employees	4,030,139.84	4,539,571.55	5,248,251.90
04	Food	759.65	1,009.79	1,047.41
05	Clothing	11,993.14	5,978.59	7,940.56
06	Housekeeping Supplies and Expense	83,391.00	96,594.04	93,029.78
07	Lab. Med. and General Care	12,451.80	12,991.66	12,978.27
08	Heat and Other Plant Operations	959,879.30	1,287,847.59	1,339,270.44
09	Farm and Grounds	86,834.04	119,965.62	119,892.87
10	Travel and Automotive Expenses	194,492.25	223,000.64	240,979.08
11	Advertising and Printing	130,307.40	167,946.31	219,104.88
12	Repairs, Alterations and Additions	642,521.21	627,485.86	636,378.56
13	Special Supplies and Expenses	935,076.05	907,540.46	855,669.51
14	Office and Administrative Expenses	473,882.62	599,798.18	661,041.19
15	Equipment	548,233.12	659,085.87	642,844.17
16	Rentals	1,551,874.05	1,872,775.48	1,936,785.03
	Total	$34,539,660.83	$39,271,613.17	$47,540,071.77

UNIVERSITY OF MASSACHUSETTS

at Amherst

Schedule A-1

Comparative Statement of Funds Forwarded to State Treasurer

on account of Income from Fees, Sales and Services

	1968		1969		1970	
Instruction						
Tuition - Amherst	$3,416,337.99		$3,163,575.59		$3,385,772.11	
Tuition - Summer School - Amherst	342,467.70		264,913.80		173,381.50	
Sales - Productive Enterprise	62,283.07		65,381.56		68,668.72	
Other Student Receipts	31,117.20		19,881.56		18,015.00	
Other Sales	44,427.95		50,628.86		54,694.32	
Reimbursement for Services - Federal Government	-0-		2,979.00		4,098.00	
		$3,896,633.91		$3,567,360.37		$3,704,629.65
Extension Services						
Miscellaneous		90.65		120.91		6.10
Experiment Station						
Sales	6,517.70		3,699.18		8,200.75	
Waltham Field Station	18.00		17.00		14.00	
		6,535.70		3,716.18		8,214.75
Control Services						
Fertilizer Law	20,611.47		19,939.62		19,391.78	
Poultry Disease Law	19,494.90		17,608.95		16,648.65	
Dairy Glassware	544.80		556.35		698.25	
Commercial Feedstuffs	28,100.00		27,380.00		27,578.85	
Seed Law	1,114.50		986.25		1,088.00	
Dairy Cattle Certification	-0-		15.50		-0-	
Drivers of Bulk Milk Trucks	112.00		92.00		148.00	
M. G. Control Testing	18,841.15		20,972.70		22,565.00	
		88,818.82		87,551.37		88,118.53
Operation of Plant						
Students Room Rent	456,522.75		443,801.77		448,231.60	
Transient Rent	-0-		-0-		-0-	
Employee's Rent	95,242.80		78,962.73		94,443.90	
Other Rents	133,425.57		10,793.74		6,073.26	
Miscellaneous	33,385.46		101,774.72		2,386.63	
Reimbursements for Services - Boarding Halls	433,445.57		245,000.00		245,000.00	
		1,152,022.15		880,332.96		796,125.39
Miscellaneous						
Other	32,747.36		54,291.06		29,525.04	
Reimbursement for Services - Other than Federal Government - Resesrch Projects	81,241.05		-0-		123,101.37	
		113,988.41		54,291.06		152,626.41
		$5,258,089.64		$5,264,616.35		$5,465,783.28

Schedule A-2

State Appropriations

Comparative Statement by Subsidiary Accounts

Subsidiary Account		1968	1969	1970
General Maintenance				
1350-01-01	Salaries, Permanent Positions	$17,119,140.00	$18,932,000.00	$30,630,920.00
1350-01-02	Salaries, Other	5,217,695.00	5,911,000.00	496,025.00
1350-01-03	Services, Non-Employees	3,455,000.00	3,709,000.00	4,384,080.00
1350-01-04	Food for Persons	980.00	1,020.00	1,050.00
1350-01-05	Clothing	12,000.00	6,000.00	8,000.00
1350-01-06	Housekeeping Supplies and Expenses	82,000.00	95,000.00	91,500.00
1350-01-07	Laboratory, Medical and General Care	10,000.00	10,000.00	10,000.00
1350-01-08	Heat and Other Plant Operations	890,000.00	1,200,000.00	1,260,000.00
1350-01-09	Farm and Grounds	86,920.00	120,000.00	120,000.00
1350-01-10	Travel and Automotive Expenses	169,000.00	188,000.00	179,950.00
1350-01-11	Advertising and Printing	111,000.00	140,000.00	150,000.00
1350-01-12	Repairs, Alterations and Additions	605,000.00	600,000.00	600,250.00
1350-01-13	Special Supplies and Expenses	665,000.00	687,000.00	683,975.00
1350-01-14	Office and Administrative Expenses	409,000.00	513,480.00	570,000.00
1350-01-15	Equipment	375,000.00	472,000.00	389,900.00
1350-01-16	Rentals	955,600.00	950,000.00	950,000.00
	Totals	$30,163,335.00	$33,534,500.00	$40,525,650.00(a) (b) (c)
Other Maintenance				
1350-10-13	For Certain Scholarships	$ 600,000.00	$ 700,000.00	$ 850,000.00(a)
1350-35-14	Entertainment of Distinguished Visitors	1,000.00	1,000.00	1,000.00(a)
1350-36-16	Rental Fee President's House	1,200.00	1,200.00	1,200.00(a)
1350-40-03	Disadvantaged Students	-0-	50,000.00	100,000.00(a)
1350-40-13	Disadvantaged Students	-0-	100,000.00	200,000.00(a)
1350-41-15	Program of Assistance to Higher Education	100,000.00	100,000.00	100,000.00(a)
1350-50-13	Library Books	200,000.00	200,000.00	200,000.00(a)
1350-70-03	Senior Internship	35,000.00	35,000.00	35,000.00(a)
1350-71-03	Legislative Internship	9,000.00	9,000.00	35,000.00(a)
1350-80-03	Technical Services	25,000.00	175,000.00	171,038.93
1350-21-00	Receipts Projects	174,184.11	235,791.72	198,877.67
3304-44-03	Inland Fish and Game	8,050.00	8,000.00	8,000.00
3304-44-10	Inland Fish and Game	-0-	500.00	500.00
3304-55-03	Fisheries and Cooperative Research	10,000.00	10,000.00	10,000.00
	Totals	$ 1,163,434.11	$ 1,625,491.72	$ 1,910,616.60
Capital Outlay				
8068-31	Roads, Sidewalks and Parking Areas	$ 1,000,000.00	$ -0-	$ -0-
3013-21-17	Fire Truck	32,000.00	-0-	-0-
8069-66	Acquisition of Land	-0-	100,000.00	-0-
8069-67	Library Books for Amherst	-0-	500,000.00	-0-
8069-68	Construction of Avian Biology Building	-0-	105,000.00	-0-
8364-26	Renovation of Older Classroom Buildings	-0-	74,895.21	-0-
8465-12	Renovation of Older Classroom Buildings	-0-	218,000.00	-0-
8066-26	Improvements and Additions to Power Plant	-0-	200,000.00	-0-
	Totals	$ 1,032,000.00	$ 1,197,895.21	$ -0-
	Grand Total	$32,358,769.11	$36,357,886.93	$42,436,266.60

(a) Authorized by Chapter 452 of the Acts of 1969

(b) Authorized by Chapter 811 of the Acts of 1969

(c) Includes transfer from Budget Bureau for upgrading and salary increase

Schedule A-3

Capital Outlay Appropriations

Under Supervision and Control of the

Bureau of Building Construction

8070-07	For the construction of a classroom, laboratory and office building for the college of arts and sciences, including the cost of furnishings, equipment, site development and the replacement of tennis courts, to be in addition to the amount appropriated in item 8069-65 of section two of chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight	582,800.00 (a)
8070-08	For the construction of certain additional library facilities, including the cost of furnishings and equipment; to be in addition to the amount appropriated in item 8068-27 of section two of chapter six hundred and eighty-two of the acts of nineteen hundred and sixty-seven, as amended by chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight; provided, that expenditures from this item shall be contingent upon prior approval of the project by the proper federal authorities and assurance by such authorities that the federal allocation for the cost of the project will be not less than two million dollars	2,000,000.00 (a)
8070-45 U64-3	For the purchase and installation of furnishings and equipment for teaching and research facilities, undergraduate and graduate classrooms, laboratories, and faculty offices, including a chemistry tower with basement storage and foundations for two additional towers, a technical library wing and a computer center wing; to be in addition to the amount appropriated in item 8067-23 of section two of chapter five hundred and ninety of the acts of nineteen hundred and sixty-six	1,735,000.00 (b)
8070-46 U63-5	For the construction of additional facilities to include a theatre and auditorium in the classroom and laboratory building for the college of arts and sciences, including cost of furnishings and equipment, to be in addition to the amount appropriated in item 8069-63 of section two of chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight; total project cost not to exceed thirteen million eight hundred thousand dollars	13,390,000.00 (b)
8070-47 U68-3	For the construction of an addition to the health services building, including certain renovations to the existing building and the cost of furnishings and equipment, to be in addition to the amount appropriated in item 8069-97 of section two of chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight; total project cost not to exceed one million three hundred and sixty-eight thousand dollars	1,268.000.00 (b)

(a) Authorized by Chapter 138 of the Act of 1969

(b) Authorized by Chapter 767 of the Acts of 1969

Other Continuing State Appropriations

Name and Account Number	Grant	Encumbrance	Expended	June 30, 1970
Federal Grant Held by State Treasurer				
Grant #4550-09 New Facilities for Research and Graduate Training - Morrill Science Center - Movable Property	$54.82	$36.98	-0-	$17.84
State Technical Service Grant				
Grant #4550-00 State Technical Services Act of 1965	28.20	-0-	-0-	28.20
Total	$83.02	$36.98	-0-	$46.04

Account Number and Name	Appropriation and Allotment	Expenditures and Encumbrances Administration	Instruction	Extension Service
1350-01				
01 Salaries, Permanent	$30,630,920.00	$2,167,932.14	$22,471,025.09	$758,020.25
02 Salaries, Other	496,025.00	98,880.92	111,883.64	29.28
03 Services, Non-Employee	4,384,080.00	130,882.02	4,123,790.49	3,708.38
04 Food	1,050.00	-0-	797.41	-0-
05 Clothing	8,000.00	6,308.36	307.10	-0-
06 Housekeeping Supplies & Expenses	91,500.00	-0-	3,999.11	-0-
07 Laboratory, Medical and General Care	10,000.00	-0-	9,978.56	-0-
08 Heat and Other Plant Operation	1,260,000.00	-0-	-0-	-0-
09 Farm & Grounds	120,000.00	-0-	57,714.89	112.85
10 Travel and Automotive Expenses	179,950.00	14,834.82	121,611.55	1,376.53
11 Advertising and Printing	150,000.00	122,851.32	26,613.31	-0-
12 Repairs, Alterations, & Additions	600,250.00	15,398.20	113,696.46	1,118.11
13 Special Supplies & Expenses	683,975.00	66,481.07	588,812.01	674.61
14 Office & Administrative Expense	570,000.00	81,103.74	472,956.30	8,197.25
15 Equipment	389,900.00	11,256.45	328,848.91	-0-
16 Rental	950,000.00	259,747.05	121,996.42	15.00
Total	$40,525,650.00	$2,975,676.09	$28,554,031.25	$773,252.26
Other Maintenance				
1350-10-13 Scholarships	$ 850,000.00	$ -0-	$ 843,956.65	-0-
1950-34-14 Ent. of Distinguished Visitors	1,000.00	1,000.00	-0-	-0-
1350-36-16 Rent - President's House	1,200.00	1,200.00	-0-	-0-
1350-40-03 Disadvantaged Students	100,000.00	-0-	98,877.52	-0-
1350-40-13 Disadvantaged Students	200,000.00	-0-	199,819.25	-0-
1350-41-15 Assistance to Higher Education	100,000.00	-0-	99,999.94	-0-
1350-50-13 Library Books	200,000.00	-0-	200,000.00	-0-
1350-70-03 Senior Internship	35,000.00	-0-	31,399.45	-0-
1350-71-03 Legislative Internship	35,000.00	-0-	35,000.00	-0-
1350-80-03 Technical Services	171,038.93	-0-	64,991.79	-0-
3304-44 Inland Fish and Game	8,500.00	-0-	8,365.71	-0-
3304-55 Fisheries & Coop. Res.	10,000.00	-0-	10,000.00	-0-
1350-21 Receipts for Research	198,877.67	-0-	117,034.93	-0-
4550-00 Technical Services Act of '65	28.20	-0-	-0-	-0-
4550-09 Federal Grant Fund	54.82	-0-	-0-	-0-
Total	$ 1,910,699.62	$ 2,200.00	$ 1,709,445.24	-0-
Grand Total	$42,436,349.62	$2,977,876.09	$30,263,476.49	$773,252.26

(a) Balances reverted to State Treasurer

(b) Balances carried forward to Fiscal Year 1971

A-5

Maintenance Appropriation

Division and Subsidiary Account

Expenditures and Encumbrances			Total	Balance of
Experiment Station	Control Service	Operation of Plant	Expenditure and Enc.	Appropriation June 30, 1970
$1,276,382.82	$384,900.60	$3,571,607.01	$30,629,867.91	$ 1,052.09
76,866.63	39,979.13	167,840.36	495,479.96	545.04
10,501.12	16,671.04	91,636.17	4,377,189.22	6,890.78
-0-	-0-	250.00	1,047.41	2.59
52.70	149.68	1,122.72	7,940.56	59.44
400.00	-0-	86,949.07	91,348.18	151.82
-0-	-0-	-0-	9,978.56	21.44
-0-	-0-	1,259,434.18	1,259,434.18	565.82
15,102.57	906.95	46,055.61	119,892.87	107.13
3,148.56	10,270.91	28,707.43	179,949.80	.20
8.91	-0-	341.20	149,814.74	185.26
6,752.88	1,584.04	461,423.32	599,973.01	276.99
3,592.27	11,385.52	11,400.41	682,345.89	1,629.11
18,778.12	2,563.86	(13,635.14)	569,964.13	35.87
486.18	258.75	49,048.35	389,898.64	1.36
4,739.23	-0-	563,306.48	949,804.18	195.82
$1,416,811.99	$468,670.48	$6,325,487.17	$40,513,929.24	$ 11,720.76[a]
$ -0-	$ -0-	$ -0-	$ 843,956.65	$ 6,043.35[a]
-0-	-0-	-0-	1,000.00	-0-
-0-	-0-	-0-	1,200.00	-0-
-0-	-0-	-0-	98,877.52	1,122.48[a]
-0-	-0-	-0-	199,819.25	180.75[a]
-0-	-0-	-0-	99,999.94	.06[a]
-0-	-0-	-0-	200,000.00	-0-
-0-	-0-	-0-	31,399.45	3,600.55[a]
-0-	-0-	-0-	35,000.00	-0-
-0-	-0-	-0-	64,991.79	106,047.14[b]
-0-	-0-	-0-	8,365.71	134.29[a]
-0-	-0-	-0-	10,000.00	-0-
-0-	-0-	-0-	117,034.93	81,842.74[b]
-0-	-0-	-0-	-0-	28.20[b]
-0-	-0-	-0-	-0-	54.82[b]
-0-	-0-	-0-	$ 1,711,645.24	$199,054.38
$1,416,811.99	$468,670.48	$6,325,487.17	$42,225,574.48	$210,775.14

Schedule A-6

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Central Administration				
A11	Trustees	$ -0-	$ 2,005.93	$ -0-	$ 2,005.93
A12	Office of the President	81,072.35	20,655.19	-0-	101,727.54
A13	Office of the Secretary	50,243.09	5,645.66	-0-	55,888.75
A14	Office of the Dean of Administration	41,861.79	3,521.84	-0-	45,383.63
	Total	$ 173,177.23	$ 31,828.62	$ -0-	$ 205,005.85
	Office of University Relations				
AA1	News Bureau	$ 47,783.11	$ 4,599.72	$ -0-	$ 52,382.83
AA2	Publications Office	59,268.77	113,984.40	150.75	173,403.92
AA3	Photographic Section	49,569.26	(1,925.38)	1,607.09	49,250.97
AA4	Film Center	845.60	9,223.26	323.25	10,392.11
AA5	Development	38,926.05	622.92	19,546.21	59,095.18
AA6	Radio Station WFCR-FM	69,496.95	10,032.40	18,926.03	98,455.38
AA7	Television	3,276.87	746.54	-0-	4,023.41
AB1	Office of Budgeting and Institutional Studies	49,095.03	6,009.98	-0-	55,105.01
	Total	$ 318,261.64	$ 143,293.84	$ 40,553.33	$ 502,108.81
	Business and Financial Management				
B11	Treasurer's Office	$ 934,159.00	$ 340,881.85	$ 110,458.85	$ 1,385,499.70
B12	Business and Personnel Office	359,693.17	18,992.41	48,571.71	427,257.29
B13	Physical Plant Dept. Executive Office	29,510.48	1,029.52	2,116.80	32,656.80
B14	Campus Security	441,542.75	14,599.65	82,981.58	539,123.98
B16	Duplicating Service	78,685.91	9,161.12	28,745.83	116,592.86
B17	Central Mailing	62,664.90	18,194.00	1,995.29	82,854.19
	Total	$ 1,906,256.21	$ 402,858.55	$ 274,870.06	$ 2,583,984.82
	Residential College				
DD1	Orchard Hill Residential College	$ 5,903.24	$ 1,613.97	$ 4,052.42	$ 11,569.63
DD5	Southwest Residential College	24,214.14	2,156.55	11,330.54	37,701.23
	Total	$ 30,117.38	$ 3,770.52	$ 15,382.96	$ 49,270.86
	Provost				
E11	Provost's Office	$ 294,505.88	$ 24,470.48	$ 292,348.54	$ 611,324.90
E13	Four-College Programs	4,000.00	6,500.00	-0-	10,500.00
E15	Schedule Office	67,143.15	3,725.86	2,455.65	73,324.66
E17	Graduate Assistants	1,992,947.75	-0-	3,590.58	1,996.538.33
E18	Nantucket Research Center	7,193.25	645.35	-0-	7,838.60
E19	Fine Arts Council	-0-	28.25	8,318.39	8,346.64
	Total	$ 2,365,790.03	$ 35,369.94	$ 306,713.16	$ 2,707,873.13

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Student Personnel				
F21	Dean of Students	$ 78,133.90	$ 4,982.84	$ 351.75	$ 83,468.49
F22	Dean of Men	28,342.10	2,275.82	7,325.74	37,943.66
F23	Dean of Women	-0-	-0-	198.74	198.74
F24	Placement and Financial Aid Services	133,072.68	9,226.42	15,908.38	158,207.48
F26	Counseling and Guidance	141,466.92	7,989.06	39,446.09	188,902.07
F27	Associate Dean of Students	726,700.48	20,298.22	63,389.64	810,388.34
F28	Summer Counseling Trust Funds	-0-	-0-	11,230.00	11,230.00
F29	Housing Office	-0-	55.66	909.75	965.41
F30	Admissions and Records	330,582.32	44,133.19	4,369.04	379,084.55
F42	Off-Campus Work Study (Not State Fund)	-0-	-0-	134,867.50	134,867.50
	Total	$ 1,438,298.40	$ 88,961.21	$ 277,996.63	$ 1,805,256.24
	Library				
G11	Library	$ 1,332,871.57	$ 152,571.91	$ 16,429.94	$ 1,501,873.42
G12	Board of Higher Education	(15,841,21)	628.91	-0-	(15,212.30)
	Total	$ 1,317,030.36	$ 153,200.82	$ 16,429.94	$ 1,486,661.12
	Audio Visual Center				
H11	Audio Visual Center	$ 64,407.49	$ 16,256.55	$ 28,081.11	$ 108,745.15
	Total	$ 64,407.49	$ 16,256.55	$ 28,081.11	$ 108,745.15
	College of Arts and Sciences				
J11	Dean of Arts and Sciences	$ 277,287.60	$ 32,439.22	$ 626.65	$ 310,353.47
J12	Economics	353,950.32	9,100.58	7,963.71	371,014.61
J13	Bureau of Government Research	79,201.59	3,343.07	26,317.66	108,862.32
J14	English	1,512,384.51	23,433.93	37,085.39	1,572,903.83
J15	Slavic Languages and Literature	109,027.15	1,542.38	-0-	110,569.53
J16	Germanic Languages and Literature	329,745.10	4,880.71	18,898.95	353,524.76
J17	Government	469,968.77	9,104.74	69,191.26	548,264.77
J18	History	650,764.82	11,675.25	12,176.97	674,617.04
J19	Music	322,264.92	27,586.65	1,030.51	350,882.08
J20	Philosophy	229,271.90	3,509.84	16,396.12	249,177.86
J21	Psychology	650,496.16	52,097.44	279,036.19	981,629.79
J22	Biochemistry	122,119.44	11,127.41	87,167.01	220,413.86
J23	Romance Languages	797,954.80	11,252.36	36,300.54	845,507.70
J24	Sociology	479,928.64	11,980.47	94,396.91	586,306.02
J25	Speech	601.179.12	34,145.53	32,444.65	667,769.30
J26	Art	377,089.86	23,399.47	4,312.14	404,801.47
J27	Anthropology	87,496.01	23,940.00	1,084.25	112,520.26
J32	Microbiology	196,690.22	29,521.13	165,473.47	391,684.82
J33	Botany	298,477.52	43,100.58	95,126.38	436,704.48

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	College of Arts and Sciences (Continued)				
J34	Chemistry	$ 707,198.97	$ 106,775.99	$ 258,823.13	$ 1,072,798.09
J35	Geography	13,407.64	2,112.27	1,572.66	17,092.57
J36	Geology	321,854.85	27,447.41	61,400.34	410,702.60
J37	Mathematics	1,138,473.41	19,064.24	80,192.83	1,237,730.48
J38	Physics	884,473.89	87,926.98	569,884.87	1,542,285.74
J39	Zoology	483,117.93	70,568.70	243,228.78	796,915.41
J40	Statistics	-0-	-0-	-0-	-0-
J41	Astronomy - Four College	573.00	780.87	-0-	1,353.87
J42	Comparative Literature	88,648.13	2,192.83	1,206.37	92,047.33
J44	Linquistics Program	37,118.78	2,158.30	472.85	39,749.93
J50	Black Studies Program	4,343.19	4,399.74	-0-	8,742.93
J51	Dept. of Asian Studies	956.25	611.89	-0-	1,568.14
	Total	$11,625,464.49	$ 691,219.98	$ 2,201,810.59	$14,518,495.06
	College of Agriculture (Instruction)				
K01	Administration	$ 85,562.08	$ 4,707.66	$ 1,635.00	$ 91,904.74
K03	Agricultural and Food Economics	152,989.88	5,059.62	237.50	158,287.00
K04	Agricultural Engineering	96,799.74	4,036.68	153.23	100,989.65
K07	Entomology	109,551.16	10,058.52	-0-	119,609.68
K08	Research and Production Service	10,893.04	13,767.99	-0-	24,661.03
K09	Plant and Soil Sciences	269,520.65	29,563.22	13,661.18	312,745.05
K10	Food Science and Technology	133,305.82	7,732.01	5,542.11	146,579.94
K11	Forestry and Wildlife Management	136,625.98	14,232.46	11,133.72	161,992.16
K12	Landscape Architecture	249,069.72	8,904.36	3,594.00	261,568.08
K13	Environmental Sciences	16,775.42	701.97	1,560.61	19,038.00
K15	Veterinary and Animal Sciences	387,905.03	72,380.25	3,914.73	464,200.01
K16	Plant Pathology	26,570.21	4,880.52	-0-	31,450.73
K17	Restaurant & Hotel Administration	91,719.24	4,669.81	130.50	96,519.55
	Total	$ 1,767,287.97	$ 180,695.07	$ 41,562.58	$ 1,989,545.62
	(Extension Service)				
K21	Administration	$ 97,771.42	$ 2,728.08	$ 692,966.92	$ 793,466.42
K23	Agricultural and Food Economics	89,506.24	959.69	51,417.45	141,883.38
K24	Agricultural Engineering	37,861.46	1,196.86	13,603.67	52,661.99
K28	Cranberry Station	49,657.72	140.23	12,811.08	62,609.03
K29	Entomology	17,795.09	349.77	15,418.93	33,563.79
K30	Plant and Soil Sciences	99,868.04	1,019.98	28,292.31	129,180.33
K31	Food Science and Technology	34,370.22	444.65	1,608.20	36,423.07
K32	Forestry and Wildlife Management	22,096.15	839.50	16,798.63	39,734.28
K33	4-H	33,087.73	1,058.30	30,011.17	64,157.20
K35	Landscape Architecture	2,999.88	-0-	4,220.00	7,219.88
K38	Veterinary and Animal Sciences	62,239.61	1,451.24	60,342.78	124,033.63
K40	Environmental Sciences	175,140.01	834.29	84,097.58	260,071.88
K41	Plant Pathology	24,565.71	344.11	9,991.74	34,901.56
K42	Restaurant & Hotel Administration	14,798.63	127.65	20,862.31	35,788.59
	Total	$ 761,757.91	$ 11,494.35	$ 1,042,442.77	$ 1,815,695.03

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Division

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	(Research)				
K51	Administration	$ 26,351.09	$ 1,021.52	$ 14,576.22	$ 41,948.83
K53	Agricultural and Food Economics	59,932.61	850.28	66,839.00	127,621.89
K54	Agricultural Engineering	80,933.73	1,389.95	53,254.17	135,577.85
K57	Environmental Sciences (Amherst)	69,378.55	876.88	86,220.04	156,475.47
K60	Cranberry Station	108,295.35	6,689.48	57,670.08	172,654.91
K62	Entomology	$ 33,292.71	$ 490.42	$ 33,786.31	$ 67,569.44
K63	Research and Production Service	48,311.52	509.46	150.00	48,970.98
K64	Plant and Soil Sciences	181,458.71	2,940.80	149,601.69	334,001.20
K65	Food Science and Technology	134,876.44	400.65	149,773.75	285,050.84
K66	Forestry and Wildlife Management	177,975.88	2,121.83	92,510.98	272,608.69
K68	Landscape Architecture	-0-	-0-	2,508.00	2,508.00
K71	Veterinary and Animal Sciences	242,348.19	14,970.95	178,920.63	436,239.77
K73	Environmental Sciences (Waltham)	136,499.73	20,157.33	90,812.54	247,469.60
K75	Natural Resources Project #3-35-R	8,504.51	20.00	14,683.20	23,207.71
K76	Plant Pathology	55,591.55	621.87	30,258.84	86,472.26
	Total	$ 1,363,750.57	$ 53,061.42	$ 1,021,565.45	$ 2,438,377.44
	(Control Service)				
K81	Seed Law	$ 1,533.42	$ -0-	$ -0-	$ 1,533.42
K82	Mastitis Control	50,002.27	1,461.44	-0-	51,463.71
K84	Feed, Seed, Fertilizer and Dairy Law	137,046.94	7,463.98	-0-	144,510.92
K85	Shade Tree Labs	100,795.63	3,969.13	-0-	104,764.76
K86	Pullorum Control	126,321.45	13,223.83	-0-	139,545.28
K87	M. G. Control	7,230.60	393.58	-0-	7,624.18
K88	Environmental Science	18,620.46	607.75	-0-	19,228.21
	Total	$ 441,550.77	$ 27,119.71	$ -0-	$ 468,670.48
	School of Business Administration				
L11	Dean of Business Administration	$ 148,133.85	$ 30,308.97	$ 43,486.78	$ 221,929.60
L12	Accounting	246,467.13	989.42	2,799.86	250,256.41
L13	General Business and Finance	338,613.60	1,443.74	11,428.76	351,486.10
L14	Management	297,124.80	1,103.46	11,567.19	309,795.45
L15	Marketing	167,752.80	1,007.21	1,349.90	170,109.91
L16	Center for Business & Economic Research	61,607.32	397.16	3,069.39	65,073.87
	Total	$ 1,259,699.50	$ 35,249.96	$ 73,701.88	$ 1,368,651.34
	School of Engineering				
M11	Dean of Engineering	$ 173,854.66	$ 20,589.38	$ 27,297.91	$ 221,741.95
M12	Chemical Engineering	263,392.06	26,353.63	115,176.34	404,922.03
M13	Civil Engineering	396,582.57	16,006.77	166,109.37	578,698.71
M14	Mechanical and Aerospace Engineering	516,216.87	29,529.72	89,350.75	635,097.34
M15	Electrical Engineering	391,269.41	35,876.44	73,292.69	500,438.54
M16	Industrial Engineering	196,004.25	6,587.55	20,334.22	222,926.02
M17	Basic Engineering	2,351.42	4.20	-0-	2,355.62
M18	STSA-Mass 6801-DA1 (Phase I)	-0-	13.20	18,191.58	18,204.78
	Total	$ 1,939.671.24	$ 134,960.89	$ 509,752.86	$ 2,584,384.99

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	School of Home Economics				
N11	Dean of Home Economics	$ 86,668.66	$ 7,874.93	$ 378.04	$ 94,921.63
N12	Home Economics Extension	92,256.10	1,296.94	29,111.24	122,664.28
N13	Nutrition and Food	89,576.00	4,262.97	3,662.82	97,501.79
N14	Home Economics Education	30,176.72	620.49	-0-	30,797.21
N15	Human Development	79,096.13	1,084.96	2,568.23	82,749.32
N16	Management and Family Economics	761.15	551.35	-0-	1,312.50
N17	Textiles, Clothing & Environmental Arts	96,608.35	991.14	144.75	97,744.24
	Total	$ 475,143.11	4 16,682.78	$ 35,865.08	$ 527,690.97
	School of Nursing				
O11	School of Nursing	$ 428,030.59	$ 26,738.16	$ 62,741.72	$ 517,510.47
	Total	$ 428,030.59	$ 26,738.16	$ 62,741.72	$ 517,510.47
	School of Physical Education				
P11	Dean of Physical Education	$ 260,218.69	$ 38,207.27	$ 117.60	$ 298,543.56
P12	Physical Education for Men	274,169.52	11,517.02	4,096.12	289,782.66
P13	Physical Education for Women	276,006.45	9,773.10	3,033.22	288,812.77
P14	Athletics and Intramurals	298,905.88	9,198.55	507,542.84	815,647.27
P15	Recreation	55,343.24	2,312.39	150.00	57,805.63
	Total	$ 1,164,643.78	$ 71,008.33	$ 514,939.78	$ 1,750,591.89
	School of Education				
Q11	School of Education	$ 1,213,351.03	$ 93,273.35	$ 1,285,803.81	$ 2,592,428.19
	Total	$ 1,213,351.03	$ 93,273.35	$ 1,285,803.81	$ 2,592,428.19
	Division of Military Science				
RA1	Air ROTC	$ 7,823.00	$ 1,106.91	$ -0-	$ 8,929.91
RB1	Army ROTC	19,030.15	1,439.55	-0-	20,469.70
	Total	$ 26,853.15	$ 2,546.46	$ -0-	$ 29,399.61
	Graduate School				
S11	Graduate School Office	$ 186,578.05	$ 17,786.35	$ 107,567.27	$ 311,931.67
S12	Computer Science	93,229.06	36,520.23	21,516.31	151,265.60
S13	Research Computing Center	92,211.72	40,136.83	240,508.94	372,857.49
S14	Water Resources Research Center	21,294.21	165.06	215,533.00	236,992.27
S15	Univ. of Massachusetts Press	1,656.50	180.40	67,246.03	69,082.93

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Graduate School (Continued)				
S16	Office of Research Services	$ 6.00	$ 17.40	$ 94,081.90	$ 94,105.30
S17	Polymer Science and Engineering	86,983.64	5,949.21	160,558.35	253,491.20
S18	Marine Sciences Program	2,040.00	691.98	-0-	2,731.98
S19	Graduate Assistants Faculty Replacement	44,223.49	-0-	216.42	44,439.91
S20	Fellowship Section	149,549.99		2,180.68	151,730.67
	Total	$ 677,772.66	$ 101,447.46	$ 909,408.90	$ 1,688,629.02
	Labor Relations and Research Center				
T11	Labor Center General Fund	$ 115,829.08	$ 12,047.78	$ 11,148.45	$ 139,025.31
T12	Graduate Program	-0-	1,151.72	-0-	1,151.72
T13	Graduate Assistants	42,732.34	-0-	-0-	42,732.34
T14	Faculty Research	440.00	112.70	-0-	552.70
T15	Federal Research	-0-	33.60	78,122.40	78,156.00
T16	Labor Education Extension	7,877.50	1,786.11	-0-	9,663.61
T17	Library and Publications	6,027.24	398.03	-0-	6,425.27
	Total	$ 172,906.16	$ 15,529.94	$ 89,270.85	$ 277,706.95
	Summer School				
U11	Summer School	$ 578,987.54	$ 1.00	$ 19,867.78	$ 598,856.32
	Total	$ 578,987.54	$ 1.00	$ 19,867.78	$ 598,856.32
	Student Health Services				
V11	Student Health Services	$ -0-	$ -0-	$ 1,161,115.46	$ 1,161,115.46
	Total	$ -0-	$ -0-	$ 1,161,115.46	$ 1,161,115.46
	Public Health				
WW1	Public Health	$ 136,611.97	$ 10,546.69	$ 30,503.59	$ 177,662.25
WW2	Environmental Health and Safety	2,632.37	755.97	582.00	3,970.34
	Total	$ 139,244.34	$ 11,302.66	$ 31,085.59	$ 181,632.59

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Division

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Operation of Plant				
X01	Contract, Maintenance and Repair	$ 15,010.00	$ 148,173.14	$ -0-	$ 163,183.14
X02	Utility Expense	-0-	714,649.55	-0-	714,649.55
X04	Maintenance Contract Services	-0-	800.00	-0-	800.00
X05	Maintenance Force Projects	-0-	14.65	-0-	14.65
X06	Maintenance Contract Projects	-0-	(7,400.00)	-0-	(7,400.00)
X12	Materials and Supplies (Maint. & Repairs)	-0-	330,763.84	-0-	330,763.84
X14	Materials and Supplies (Custodial)	-0-	78,732.39	-0-	78,732.39
X15	College Supply	-0-	(61,329.86)	-0-	(61,329.86)
X16	Coal and Freight	-0-	531,595.62	-0-	531,595.62
X20	Administrative Division	-0-	35,122.93	-0-	35,122.93
X21	Division Office	-0-	17,903.84	-0-	17,903.84
X22	Administration Section	10,544.93	5,562.36	12,909.70	29,016.99
X23	Personnel/Employee Relations Section	23,743.63	1,870.16	18,361.73	43,975.52
X24	Comptroller Section	45,337.10	2,622.93	32,351.93	80,311.96
X31	Division Office	-0-	-0-	275.00	275.00
X32	Planning Section	2,242.50	-0-	-0-	2,242.50
X40	Design Engineering Division	27,718.65	9,126.79	-0-	36,845.44
X41	Division Office	3,981.23	6.46	875.04	4,862.73
X42	Landscape Architecture Section	32,984.42	3,038.12	1,334.87	37,357.41
X43	Mechanical Engineering Section	71,852.83	959.00	4,356.46	77,168.29
X44	Electrical Engineering Section	24,943.64	547.40	14,487.23	39,978.27
X45	Architectural Section	6,730.75	-0-	-0-	6,730.75
X46	Civil Engineering and Drafting Section	23,307.14	642.36	47,187.89	71,137.39
X47	Specifications Section	144.00	100.90	15,389.26	15,634.16
X50	Project Engineering Division	-0-	53.60	-0-	53.60
X51	Division Office	16,215.29	457.97	5,378.80	22,052.06
X52	Project Section	33,995.16	14.50	22,609.95	56,619.61
X60	Amherst Maintenance Division	-0-	7,881.20	12.00	7,893.20
X61	Division Office	28,974.15	1,508.65	6,149.40	36,632.20
X62	Technical Staff Section	23,392.45	532.11	32,674.69	56,599.25
X63	Work Control Section	83,181.93	752.87	44,931.07	128,865.87
X64	Central Stores Section	83,095.68	1,129.08	29,098.82	113,323.58
X65	Transportation Section	97,070.45	5,204.77	43,571.41	145,846.63
X70	Project Section	57.48	246.08	10,575.93	10,879.49
X71	Plumbing Shop	132,732.08	1,422.31	20,563.06	154,717.45
X72	Carpentry Shop	206,131.55	349.35	74,574.25	281,055.15
X73	Masonry Shop	45,324.93	881.95	26,411.21	72,618.09
X74	Painting Shop	212,709.98	3,858.25	95,402.47	311,970.70
X75	Electrical Shop	151,193.99	414.62	35,561.44	187,170.05
X76	Operation Section	280,129.82	4,256.38	192,051.11	476,437.31
X77	Grounds and Services Section	629,109.84	10,016.75	116,643.80	755,770.39
X78	Custodial Section	1,282,201.53	4,161.12	533,641.18	1,820,003.83
X79	Power Plant	237,011.41	51,676.88	-0-	288,688.29
X92	Nantucket Research Center	-0-	1,337.62	-0-	1,337.62
X93	Wareham Cranberry Station	-0-	3,717.54	-0-	3,717.54
X94	Waltham Field Station	15.00	5,297.23	-0-	5,312.23
X96	University of Massachusetts/Boston	-0-	2.40	-0-	2.40
X99	Dormitory Rental	-0-	545,250.00	-0-	545,250.00
	Total	$ 3,831,083.54	$2,463,925.81	$ 1,437,379.70	$ 7,732,389.05

Schedule A-6 (Continued)

1970 Fiscal Year Expenditure Report

by Budget Division

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Boarding Halls				
Y11	Expense	$ -0-	$ -0-	$ 3,105,104.52	$ 3,105,104.52
Y12	Material and Supplies	-0-	-0-	2,175,363.58	2,175,363.58
	Total	$ -0-	$ -0-	$ 5,280,468.10	$ 5,280,468.10
	Student Union				
Z11	General Funds	$ -0-	$ -0-	$ 406,172.76	$ 406,172.76
Z12	Food Service Fund	-0-	-0-	309,198.23	309,198.23
Z13	University Store Fund	-0-	-0-	254,848.62	254,848.62
Z14	Recognized Student Organizations	-0-	-0-	126,408.62	126,408.62
Z16	UMass/Boston Bookstore	-0-	-0-	33,631.16	33,631.16
Z17	Student Automatic Service Trust Fund	-0-	-0-	19,730.25	19,730.25
Z18	Work Study	-0-	-0-	23,071.53	23,071.53
Z19	Graduate Student Senate	-0-	-0-	558.00	558.00
	Total	$ -0-	$ -0-	$ 1,173,619.17	$ 1,173,619.17
	Miscellaneous				
500	Reserve and Undistributed	$ 22,000.00	$ 199,594.77	$ -0-	$ 221,594.77
	Total	$ 22,000.00	$ 199,594.77	$ -0-	$ 221,594.77
	Grand Totals	$35,502,537.09	$5,011,392.15	$17,852,429.26	$58,366,358.50

*Expenditures, other than for Salaries and Wages, not distributed by departments.

Capital Outlay Expenditures and Balances

Account	Name and Number	Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Reverted to State Treasurer	Balance of Appropriation June 30, 1970
8262 12	Land Purchase	1968	$ 371,000.00	$ 366,500.00	$ -0-	$-0-	$ 4,500.00
8064 30	Land Purchase	1968	300,000.00	298,186.28	353.60	-0-	1,460.12
8065 28	Sidewalks, Parking, etc.	1969	1,000,000.00	996,473.23	1,509.20	21.60	1,995.97
8065 35	T.V., Computer, etc.	1969	1,000,000.00	989,904.33	9,348.09	95.19	652.39
8364 26	Renov. of Older Bldgs.	1970	74,895.21	18.40	63,207.30	-0-	11,669.51
8465 12	Renov. of Older Bldgs.	1970	218,000.00	43,069.39	148,824.41	-0-	26,106.20
8065 33	Renov. of Older Bldgs.	1970	38,133.02	-0-	-0-	-0-	38,133.02
8066 26	Impr. & Add. Power Plant	1971	300,000.00	76,550.47	13,344.00	-0-	210,105.53
8066 44	Const. of Teaching Fac.	1971	863,725.00	863,580.33	-0-	-0-	144.67
8067 26	Replacement of Furniture	1971	250,000.00	249,547.00	154.50	-0-	298.50
8067 27	Repair & Renov. to Older Bldgs.	1971	500,000.00	382,115.49	65,421.66	-0-	52,462.85
8067 28	Add. to Cranberry Station	1971	165,000.00	156,719.50	8,217.20	-0-	63.30
8067 69	Land Purchase	1971	300,000.00	297,410.53	200.00	-0-	2,389.47
8068 31	Const of Roads & Sidewalks	1972	1,000,000.00	782,134.95	207,549.77	-0-	10,315.28
8069 66	Land Purchase	1973	100,000.00	42,125.00	4,608.33	-0-	53,266.67
8069 67	Library Books	1973	500,000.00	474,013.67	25,564.63	-0-	421.70
8069 68	Avian Biology Bldg.	1973	105,000.00	38,148.95	27,938.70	-0-	38,912.35
			$7,085,753.23	$6,056,497.52	$576,241.39	$116.79	$452,897.53

Schedule B-1

Federal Funds/Amherst

Statement of Receipts, Disbursements and Balances

	Balance July 1, 1969	Receipts	Disbursements	Balance June 30, 1970
Instruction				
Bankhead Jones	$ 33,665.56	$ 272,428.00	$ 266,052.46	$ 40,041.10
Land Grant	33,300.37	7,303.20	-0-	40,603.57
Morrill - Nelson	36,059.43	33,333.33	25,320.05	44,072.71
Smith - Hughes	(8,085.15)	12,592.25	7,900.72	(3,393.62)
Water Resources Center	7,277.14	100,000.00	96,081.62	11,195.52
Total	$102,217.35	$ 425,656.78	$ 395,354.85	$132,519.28
Extension Service				
Smith Lever Act on Amendment 1953	$ 84,450.66	$ 707,435.00	$ 738,330.47	$ 53,555.19
Research and Marketing	-0-	53,402.00	53,402.00	-0-
Agricultural Marketing #12-05-300-122	5,000.00	-0-	2,542.07	2,457.93
Agricultural Marketing #12-05-300-140	-0-	1,500.00	678.91	821.09
Nutrition Education Program	8,367.42	454,412.00	359,809.93	102,969.49
Total	$ 97,818.08	$1,216,749.00	$1,154,763.38	$159,803.70
Experiment Station				
Hatch Amended	$ 56,037.94	$ 538,624.00	$ 543,412.33	$ 51,249.61
McIntire - Stennis	12,151.37	48,353.00	51,296.39	9,207.98
Regional Research	6,487.43	186,932.00	178,415.70	15,003.73
CSRS-716-15-14	2,414.79	5,000.00	3,353.48	4,061.31
CSRS-12-15-67-45	11,705.10	-0-	11,705.10	-0-
Total	$ 88,796.63	$ 778,909.00	$ 788,183.00	$ 79,522.63
Grand Total	$288,832.06	$2,421,314.78	$2,338,301.23	$371,845.61

Endowment Funds - Summary of Investments

as of June 30, 1970

	Cost or Book Value		% of Total	
Pooled Investments:				
Bonds and Notes				
Government	$138,942.19		11.04	
Public Utilities	212,533.99		16.89	
Industrial	60,141.84		4.78	
		$ 411,618.02		32.71
Mortgages		9,000.00		.71
Preferred Stock		30,904.89		2.45
Common Stock				
Financial	81,230.33		6.45	
Industrial	480,210.24		38.17	
Utilities	61,958.16		4.92	
		623,398.73		49.54
Total Pooled Securities		1,074,921.64		85.41
Cash				
Uninvested Cash	28,149.37		2.24	
Savings Account	2,531.79		.20	
Total Cash		30,681.16		2.44
Total Pooled Investments		$1,105,602.80		87.85
Non-Pooled Investments:				
Land				
Lincoln Land in Ohio		152,905.40		12.15
		$1,258,508.20		100.00

Schedule C-2

Endowment Funds - Principal

Statement of Pool Investments
as of June 30, 1970

Description	Date of Acquisition	Cost or Book Value	Market Value
Government Bonds and Notes			
35,000 U.S. Treasury 4 1/8's due February 15, 1974	8/14/67	$ 34,792.19	$ 30,931.25
55,000 U.S. Treasury 5's due November 15, 1970	8/14/67	55,000.00	54,587.50
25,000 Federal National Mortgage Association 5.20's due January 19, 1977	9/22/67	24,125.00	21,312.50
25,000 International Bank for Reconstruction and Development 4 1/2's due February 1, 1990	7/15/65	25,025.00	16,000.00
Total Government Bonds and Notes		$ 138,942.19	$122,831.25
Public Utility Bonds			
20,000 American Telephone and Telegraph Company debenture 4 3/8's due May 1, 1999	7/10/63	$ 20,040.27	$ 12,200.00
25,000 Boston Edison Company First Mortgage 6 1/8 due June 1, 1997, Series J	9/22/68	25,562.51	19,718.75
20,000 Commonwealth Edison Company First Mortgage V 5 1/4's due April 1, 1996	7/25/66	19,875.00	14,175.00
25,000 Florida Power and Light Company First Mortgage 4 3/8's due December 1, 1986	2/6/59 7/16/68	21,800.00	16,656.25
25,000 Florida Power and Light Company First Mortgage 7's due June 1, 1998	6/30/68	25,641.68	21,625.00
25,000 Philadelphia Electric Company First and Refunding Mortgage 4 5/8's due September 1, 1987	11/26/57 7/16/68	22,205.62	16,375.00
10,000 Public Service Electric and Gas Company First and Refunding Mortgage 4 5/8's due August 1, 1988	10/6/58	10,225.00	6,662.50
25,000 Southern Bell Telephone Company debenture 4 3/8's due April 1, 2001	7/15/65	24,437.50	14,750.00
4,000 Southern National Gas Company First Mortgage Pipe Line Sinking Fund 4 3/4's due January 1, 1979	4/24/59	4,114.33	3,035.00
20,000 Southern California Edison Company First Refunding 4 1/2's due February 15, 1990	7/15/65	20,060.00	11,825.00
20,000 Southwestern Bell Telephone Company debenture 4 3/4's due October 1, 1992	10/17/58 12/18/58 6/30/68	18,572.08	13,575.00
Total Public Utility Bonds		$212,533.99	$150,597.50
Industrial Bonds			
20,000 General Motors Acceptance Corporation debenture 4 5/8's due June 15, 1986	7/6/64	$ 20,149.84	$ 12,600.00
20,000 Gulf Oil Corporation debenture 5.35's due June 15, 1991	7/25/66	20,042.00	15,000.00
20,000 Shell Oil Corporation Sinking Fund debenture 4 5/8's due August 1, 1986	8/3/61	19,950.00	14,600.00
Total Industrial Bonds		$ 60,141.84	$ 42,200.00
Mortgages			
Theta Corporation of Theta Chi Fraternity 4%	10/9/54	$ 9,000.00	$ 9,000.00
Total Mortgages		$ 9,000.00	$ 9,000.00

Endowment Funds - Principal

Statement of Pool Investments
as of June 30, 1970

No. of Shares	Description	Date of Acquisition	Cost or Book Value	Market Value
	Preferred Stock			
288	F.A. Bartlett Tree Expert Company	6/20/66	$ 7,200.00	$ 7,200.00*
250	General Signal	6/30/70	23,704.89	24,062.50
	Total Preferred Stock		$ 30,094.89	$ 31,262.50
	Common Stock			
	Financial			
400	Aetna Life & Casualty Company	12/12/69	$ 16,156.00	$ 14,900.00
223	Bankers Trust New York Corp.	6/20/66	14,021.13	13,380.00
300	First National City Corp.	5/11/65-7/1/65	18,328.55	18,225.00
500	Security Pacific National Bank	6/30/69	19,818.15	14,875.00
400	Travelers Corp.	5/19/67-9/22/67	12,906.50	11,500.00
	Total Common Stock - Financial		$ 81,230.33	$ 72,880.00
	Industrial			
300	Addressograph-Multigraph Corp.	12/18/68	$ 24,403.77	$ 7,387.50
750	American Metal Climax, Inc.	12/26/63-12/18/68	21,639.68	27,843.75
6	Bartlett Realty Co., Inc.	6/20/66	13,926.00	13,926.00*
1000	Bartlett Tree Expert Company	6/20/66	57,000.00	57,000.00*
300	Continental Can Company	6/30/69	21,138.00	19,012.50
147	E.I. duPont de Nemours and Company	7/19/51-2/3/59	4,560.45	16,905.00
800	Federated Department Stores	12/18/68-6/30/69	28,216.65	23,600.00
186	General Electric Company	7/14/61-6/25/64-6/20/66	14,335.47	12,531.75
300	General Foods Corporation	6/30/69	23,803.17	22,237.50
301	General Motors Corp.	12/31/63-1/6/65-6/20/66	24,825.69	18,586.75
800	Goodyear Tire & Rubber Company	12/26/63-5/19/67	17,324.31	19,800.00
604	Gulf Oil Corp.	7/7/61-12/29/61-6/20/66-12/31/68	14,838.96	13,892.00
400	Hercules, Inc.	5/5/65	17,914.76	12,600.00
80	I.B.M. Corp.	9/30/66-9/30/67-12/18/68	16,811.13	20,600.00
400	Magnovox	6/30/69	18,316.76	9,200.00
300	Mobil Oil Corp.	6/20/66	12,060.54	13,162.50
200	Minnesota Mining and Mfg. Co.	10/6/67	18,021.22	15,200.00
700	Northwest Airlines	6/30/69	22,996.75	11,025.00
500	J.C. Penny Company	9/30/66-12/31/68	14,508.44	20,562.50
1050	Charles Pfizer and Company	9/30/66-12/18/68	24,021.00	31,500.00
300	Smith, Kline and French Lab.	7/26/68	15,357.69	12,262.50
800	The Southern Company	5/2/57-6/20/66	17,102.62	15,700.00
609	Standard Oil Company of New Jersey	7/19/51-12/26/63-9/30/66	25,422.30	33,342.75
400	U.S. Plywood-Champion Papers, Inc.	7/26/68	11,664.88	9,800.00
	Total Common Stock - Industrial		$ 480,210.24	$457,678.00
	Utility			
858	American Telephone and Telegraph Co.	7/19/51-1/19/65	$ 25,566.43	$ 35,070.75
440	Baltimore Gas and Electric Company	5/2/57-11/24/59-6/30/69	8,234.76	11,550.00
394	Commonwealth Edison Company	7/19/51-12/31/64	8,141.52	11,327.50
1158	Northeast Utilities	12/31/68	11,468.68	14,909.25
1200	Virginia Electric Power Company	1/31/54-12/26/63	8,546.77	22,200.00
	Total Common Stock - Utility		$ 61,958.16	$ 95,057.50
	Total Pooled Investments		$1,074,921.64	$981,506.75

*Book Value - no quotation available

Endowment Funds - Principal

Statement of Investments Not in Pool Fund
as of June 30, 1970

Land	Date of Acquisition	Cost or Book Value
Murray D. Lincoln	3/11/58	$ 41,765.00
	12/31/58	16,795.00
	2/23/60	33,600.00
	2/28/61	24,068.90
	1/17/62	36,676.50
Total - Land		$152,905.40

Schedule C-4

Statement of Endowment Fund Principal

Name of Fund	Balance July 1, 1969	Additions	Disbursements	Balance June 30, 1970
Endowments				
Alpha Sigma Phi	$ 7,100.00	$ -0-	$ -0-	$ 7,100.00
Alvord Dairy	4,197.15	-0-	-0-	4,197.15
Oscar G. Anderson Memorial	1,015.00	-0-	-0-	1,015.00
Ascension Farm	119,975.79	-0-	-0-	119,975.79
Danforth Keyes Bangs	5,861.58	-0-	-0-	5,861.58
George H. Barber	5,073.86	-0-	-0-	5,073.86
Seymour Barowsky	5,000.00	-0-	-0-	5,000.00
Joseph W. Bartlett	-0-	-0-	-0-	-0-
Oswald Behrend Award	950.59	40.21	-0-	990.80
Burnham Emergency	7,742.23	-0-	-0-	7,742.23
John Thomas and Nancy Butterworth	10,000.00	-0-	-0-	10,000.00
Buttrick	10,000.00	-0-	-0-	10,000.00
Lucius Clapp	8,740.42	-0-	-0-	8,740.42
Addison H. Clark Memorial	-0-	-0-	-0-	-0-
Class of 1882	1,766.78	37.57	-0-	1,804.35
George M. and Edith H. Codding	367,264.70	-0-	-0-	367,264.70
Guy Chester Crampton Research	2,539.03	-0-	-0-	2,539.03
Frederick G. Crane	25,518.08	-0-	-0-	25,518.08
John C. Cutter	1,098.41	-0-	-0-	1,098.41
Stephen Davis	19,175.00	-0-	-0-	19,175.00
Distinguished Visitors Committee	52,066.63	4,037.20	-0-	56,103.83
*Endowment from State	-0-	-0-	-0-	-0-
E. W. Eldridge, Jr. Memorial	1,555.00	-0-	-0-	1,555.00
George L. Farley	5,000.00	-0-	-0-	5,000.00
Harry L. Folsom Hoo Hoo Club	10,823.82	49.18	-0-	10,873.00
J. D. W. French	10,743.41	-0-	-0-	10,743.41
Kathryn F. Furcolo	8,409.73	372.40	-0-	8,782.13
Gassett	1,462.20	-0-	-0-	1,462.20
Charles A. Gleason	3,731.73	-0-	-0-	3,731.73
Grinnell	125.94	-0-	-0-	125.94
Margaret Ruth Pomeroy Hamlin	33,537.36	-0-	-0-	33,537.36
Clarence C. Hardy	119.65	-0-	-0-	119.65
Walter H. Harrison	11,836.14	-0-	-0-	11,836.14
Philip B. Hasbrouck	2,139.00	-0-	-0-	2,139.00
Hills	15,523.89	-0-	-0-	15,523.89
Mrs. Clifton Johnson	3,411.47	-0-	-0-	3,411.47
Helen E. Knowlton	15,000.00	-0-	-0-	15,000.00
Howard M. Lebow Memorial	5,200.87	297.28	-0-	5,498.15
Library	11,027.85	-0-	-0-	11,027.85
Murray D. and Anne M. Lincoln	11,200.00	-0-	-0-	11,200.00
Murray D. Lincoln	152,905.40	-0-	-0-	152,905.40
Albert P. Madeira	11,973.76	56.58	-0-	12,030.34
Elizabeth L. McNamara	1,000.00	-0-	-0-	1,000.00
Porter L. Newton Educational	24,204.46	-0-	-0-	24,204.46
J. Clark Osterhout	396.95	-0-	-0-	396.95
Charles A. Peters	1,162.77	-0-	-0-	1,162.77
Betsy C. Pinkerton	4,500.00	-0-	-0-	4,500.00
Charles S. Plumb	4,300.65	91.46	-0-	4,392.11
Frank H. Plumb	13,427.17	-0-	-0-	13,427.17
Robert F. Pomeroy Library	1,535.95	-0-	-0-	1,535.95
Allan Leon Pond	744.78	-0-	-0-	744.78
William Proctor	2,000.00	-0-	-0-	2,000.00
Frederick H. Read	1,699.55	-0-	-0-	1,699.55
V. A. Rice	2,684.11	100.00	-0-	2,784.11
Mary Robinson	3,000.00	-0-	-0-	3,000.00
Ilene Sharon Saval	1,741.00	818.84	-0-	2,559.84
William R. Sessions	4,780.97	-0-	-0-	4,780.97
Philip Sheinfield	5,800.00	-0-	-0-	5,800.00
Henry Franklin Staples Memorial	51,469.82	-0-	-0-	51,469.82
Betty Steinbugler	200.00	-0-	-0-	200.00
Stockbridge School Alumni	1,961.38	-0-	-0-	1,961.38
Ray E. Torrey Memorial	808.20	34.04	-0-	842.24
Ruth J. Totman Memorial	949.17	-0-	-0-	949.17
Frank M. West Forestry	18,328.55	-0-	-0-	18,328.55
William Wheeler	10,855.91	-0-	-0-	10,855.91
Whiting Street	2,021.70	-0-	-0-	2,021.70
Helen A. Whittier	3,338.22	-0-	-0-	3,338.22
Funds Functioning as an Endowment				
Anonymous Scholarship	3,035.09	-0-	3,035.09	-0-
Helen Mitchell	-0-	6,850.00	-0-	6,850.00
Totals	$1,136,758.87	$12,784.76	$3,035.09	$1,146,508.54

*Principal of $142,000.00 held by State Treasurer

Endowment Income

Statement of Receipts, Disbursements and Balance

Name and Purpose of Fund	July 1, 1969	Receipts from Investments	Disbursements	Balance June 30, 1970
Income Designated for Student Aid, Scholarships and Loans:				
Alpha Sigma Phi	$ 372.30	$ 303.89	$ 350.00	$ 326.19
Alvord Dairy	194.50	179.53	175.00	199.03
Ascension Farm	5,709.30	5,134.89	5,300.00	5,544.19
Danforth Keyes Bangs	343.63	250.88	300.00	294.51
Seymour Barowsky	274.00	213.93	250.00	237.93
John Thomas and Nancy Butterworth	492.51	427.99	450.00	470.50
Buttrick	2,424.68	427.99	1,300.00	1,552.67
Lucius Clapp	873.49	374.19	850.00	397.68
Addison H. Clarke Memorial	-0-	-0-	-0-	-0-
Class of 1882	41.09	75.14	37.57	78.66
George M. and Edith H. Codding	35,252.73	15,718.47	22,837.50	28,133.70
Frederick G. Crane	1,194.78	1,091.99	1,100.00	1,186.77
Stephen Davis	1,776.89	820.71	1,776.89	820.71
E. W. Eldridge, Jr. Memorial	90.21	66.60	90.00	66.81
George L. Farley	2,805.61	213.93	-0-	3,019.54
Harry L. Folsom Hoo Hoo Club	499.18	791.36	827.54	463.00
Kathryn F. Furcolo	372.40	355.62	372.40	355.62
Gassett	78.43	62.51	-0-	140.94
Charles A. Gleason	175.50	159.86	175.00	160.36
Margaret Ruth Pomeroy Hamlin	-0-	1,435.36	1,435.36	-0-
Clarence C. Hardy	60.90	5.04	-0-	65.94
Walter H. Harrison	-0-	506.48	506.48	-0-
Philip B. Hasbrouck	492.35	419.81	-0-	912.16
Mrs. Clifton Johnson	352.26	145.85	350.00	148.11
Helen E. Knowlton	729.44	642.02	-0-	1,371.46
Howard M. Lebow Memorial	121.96	223.94	121.96	223.94
Albert P. Madeira	551.58	512.33	551.58	512.33
Porter L. Newton Educational	1,176.47	1,036.02	1,100.00	1,112.49
J. Clark Osterhout	77.51	16.95	-0-	94.46
Betsy C. Pinkerton	238.30	192.56	200.00	230.86
Charles S. Plumb	1,619.23	182.93	91.46	1,710.70
Frank H. Plumb	635.62	574.58	600.00	610.20
V. A. Rice	141.87	115.89	100.00	157.76
Mary Robinson	172.33	128.49	150.00	150.82
Ilene Sharon Saval	59.84	90.72	119.68	30.88
Philip Sheinfield	144.91	248.11	-0-	393.02
Dr. Henry Franklin Staples Memorial	-0-	2,203.02	2,203.02	-0-
Stockbridge School Alumni	396.97	81.31	-0-	478.28
Ruth J. Totman Memorial	135.65	40.64	-0-	176.29
Frank M. West Forestry	872.03	784.51	850.00	806.54
Whiting Street	183.60	86.40	175.00	95.00
Helen A. Whittier	148.01	142.91	100.00	190.92
Sub-Total	$61,282.06	$ 36,485.35	$ 44,846.44	$52,920.97

Endowment Income

Statement of Receipts, Disbursements and Balances

	July 1, 1969	Receipts from Investments	Disbursements	Balance June 30, 1970
Prizes:				
Grinnell	$ 129.06	$ 5.46	$ -0-	$ 134.52
Elizabeth L. McNamara	-0-	42.93	42.93	-0-
Allan Leon Pond	105.43	31.87	14.74	122.56
Betty Steinbugler	113.11	8.53	42.10	79.54
Sub-Total	$ 347.60	$ 88.79	$ 99.77	$ 336.62
Books:				
Oscar G. Anderson Memorial	$ 582.86	$ 43.35	$ 165.00	$ 461.21
John C. Cutter	421.19	47.14	-0-	468.33
Library	2,513.27	471.95	2,098.08	887.14
Robert F. Pomeroy Library	465.09	65.75	-0-	530.84
Sub-Total	$ 3,982.41	$ 628.19	$ 2,263.08	$ 2,347.52
Miscellaneous Purposes:				
George H. Barber	$ 1,059.82	$ 217.21	$ -0-	$ 1,277.03
Oswald Behrend Award	-0-	40.21	40.21	-0-
Guy Chester Crampton Research	1,378.56	108.81	320.50	1,166.87
Distinguished Visitors Committee	6,533.94	2,186.68	-0-	8,720.62
J. D. W. French	3,408.96	459.75	1,182.72	2,685.99
Hills	1,787.47	664.33	304.63	2,147.17
Murray D. and Anne M. Lincoln	-0-	336.65	-0-	336.65
Murray D. Lincoln Land	288.56	-0-	-0-	288.56
Charles A. Peters	634.12	49.78	-0-	683.90
William Proctor	1,509.48	85.55	-0-	1,595.03
Ray E. Torrey Memorial	-0-	34.04	34.04	-0-
Sub-Total	$16,600.91	$ 4,183.01	$ 1,882.10	$18,901.82
General Purpose (Unrestricted):				
Joseph W. Bartlett	$ -0-	$ -0-	$ -0-	$ -0-
Burnham Emergency	1,132.87	331.26	-0-	1,464.13
Frederick H. Read	242.95	72.70	-0-	315.65
William R. Sessions	692.03	204.68	-0-	896.71
William Wheeler	1,583.30	464.72	-0-	2,048.02
Sub-Total	$ 3,651.15	$ 1,073.36	$ -0-	$ 4,724.51
Undistributed Income	$ 9,195.31	$ 58,647.00	$ 55,015.84	$12,826.47
Endowment from State	3,004.44	4,346.40	2,587.71	4,763.13
Funds Functioning as an Endowment				
Anonymous Scholarship #2	77.84	68.29	146.13	-0-
Helen Mitchell	-0-	139.95	-0-	139.95
Sub-Total	$ 77.84	$ 208.24	$ 146.13	$ 139.95
Total	$98,141.72	$105,660.34	$106,841.07	$96,960.99

Schedule D-1

Statement of Student Loan Funds

Trust Accounts	Balance July 1, 1969	Additions & Interest	Loan Transactions Repaid	Loaned	Cancelled	Balance, June 30, 1970 Notes	Cash	Total
Danforth Keyes Bangs	$ 7,214.05	$ 49.55	$ 2,070.15	$ 1,232.50	$ -0-	$ 2,696.27	$ 4,567.33	$ 7,263.60
Addison H. Clark Memorial	19,969.36	-0-	-0-	-0-	-0-	-0-	19,969.36	19,969.36
Class of 1905	3,559.23	-0-	-0-	-0-	-0-	354.89	3,204.34	3,559.23
Class of 1969	-0-	1,000.00	-0-	1,000.00	-0-	1,000.00	-0-	1,000.00
Vincent Goldthwait	17,587.26	78.32	10,075.18	9,712.00	-0-	6,938.42	10,727.16	17,665.58
Graduate and Foreign	5,000.00	-0-	6,725.00	7,380.00	-0-	2,125.00	2,875.00	5,000.00
Walter H. Harrison	7,322.75	506.48	-0-	-0-	-0-	-0-	7,829.23	7,829.23
Murray D. Lincoln	363.38	-0-	-0-	-0-	-0-	-0-	363.38	363.38
Massachusetts Agriculture	622.52	-0-	-0-	-0-	-0-	-0-	622.52	622.52
Massachusetts Assembly	23,910.94	(5,830.52)	5,830.52	-0-	-0-	17,889.35	191.07	18,080.42
Elizabeth L. McNamara	440.38	21.49	-0-	-0-	-0-	-0-	461.87	461.87
Michael Mathius	200.00	(150.00)	150.00	-0-	50.00	-0-	-0-	-0-
New England Feedmen's Association	757.39	-0-	-0-	-0-	-0-	-0-	757.39	757.39
Sievers Memorial	2,216.34	100.90	650.00	300.00	-0-	805.57	1,511.67	2,317.24
Henry F. Staples Memorial	22,458.63	2,524.35	31,801.37	35,609.50	-0-	12,252.13	12,730.85	24,982.98
Sub Total	$ 111,622.23	$ (1,699.43)	$ 57,302.22	$ 55,234.00	$ 50.00	$ 44,061.63	$ 65,811.17	$ 109,872.80
New England Society of New York	996.00	-0-	-0-	-0-	-0-	-0-	996.00	996.00
Total Trust Funds	$ 112,618.23	$ (1,699.43)	$ 57,302.22	$ 55,234.00	$ 50.00	$ 44,061.63	$ 66,807.17	$ 110,868.80
Federal Funds								
National Defense Student Loan	$2,709,572.41	$224,572.18	$114,642.31	$329,180.84	$9,092.50	$2,885,429.04	$ 39,623.05	$2,925,052.09
Student Nursing Loans	64,386.65	15,024.17	1,368.44	23,525.00	935.00	84,598.96	(6,123.14)	78,475.82
Total Federal Funds	$2,773,959.06	$239,596.35	$116,010.75	$325,705.84	$10,027.50	$2,970,028.00	$ 33,499.91	$3,003,527.91
Grand Total Student Loans	$2,886,577.29	$237,896.92	$173,312.97	$380,939.84	$10,077.50	$3,014,089.63	$100,307.08	$3,114,396.71

Schedule E-1

U of M Trustees for

University of Massachusetts Building Authority

Statement of Receipts, Disbursements, Transfers and Balances

Description	Balance July 1, 1969	Transfers In	Receipts	Transfers Out	Disbursements	Balance June 30, 1970
First Project						
Brett & Gorman Dorms						
Revenue Account	$ -0-	$ 9,056.50	$ 274,284.78	$ 118,245.21	$ 165,096.07	$ -0-
Maintenance and Operating Account	33,433.63	118,245.21	-0-	9,056.50	142,054.19	568.15
Unpaid Check Fund	30.00	-0-	-0-	-0-	-0-	30.00
Total	$ 33,463.63	$ 127,301.71	$ 274,284.78	$ 127,301.71	$ 307,150.26	$ 598.15
Second Project						
Dickinson, Field, Grayson and Webster Dorms						
Revenue Account	$ 1,109.35	$ -0-	$ 639,533.15	$ 304,631.84	$ 336,010.66	$ -0-
Maintenance and Operating Account	64,440.50	304,631.84	37,000.00	-0-	335,475.79	70,596.55
Unpaid Check Fund	30.00	-0-	-0-	-0-	-0-	30.00
Total	$ 65,579.85	$ 304,631.84	$ 676,533.15	$ 304,631.84	$ 671,486.45	$ 70,626.55
Third Project						
Franklin Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 122,458.27	$ -0-	$ 122,458.27	$ -0-
Total	$ -0-	$ -0-	$ 122,458.27	$ -0-	$ 122,458.27	$ -0-
Fourth Project						
Emerson, James, Melville Thoreau, Kennedy & Coolidge Dorms and Alumni Stadium						
Revenue Account	$ 7,439.40	$ -0-	$1,040,203.60	$ 296,304.04	$ 751,338.96	$ -0-
Maintenance and Operating Account	99,199.21	296,304.04	50,000.00	-0-	413,864.08	31,639.17
Unpaid Check Fund	30.00	-0-	-0-	-0-	-0-	30.00
Total	$106,668.61	$ 296,304.04	$1,090,203.60	$ 296,304.04	$1,165,203.04	$ 31,669.17
Fifth Project						
Hampshire Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 156,081.09	$ -0-	$ 156,081.09	$ -0-
Total	$ -0-	$ -0-	$ 156,081.09	$ -0-	$ 156,081.09	-0-

Schedule E-1 (Continued)

U of M Trustees for

University of Massachusetts Building Authority

Statement of Receipts, Disbursements, Transfers and Balances

Description	Balance July 1, 1969	Transfers In	Receipts	Transfers Out	Disbursements	Balance June 30, 1970
Sixth Project						
J. Q. Adams, J. Adams and Washington Dorms						
Revenue Account	$ 234.76	$ -0-	$ 872,161.22	$ 336,724.76	$ 535,671.22	$ -0-
Maintenance and Operating Account	37,931.10	336,724.76	17,000.00	-0-	389,569.28	2,086.58
Total	$ 38,165.86	$ 336,724.76	$ 889,161.22	$ 336,724.76	$ 925,240.50	2,086.58
Seventh Project						
Hampton Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 162,926.36	$ -0-	$ 162,926.36	$ -0-
Total	$ -0-	$ -0-	$ 162,926.36	$ -0-	$ 162,926.36	$ -0-
Eighth Project						
Crampton, Mackimmie, Patterson and Prince						
Revenue Account	$ 53,378.30	$ -0-	$ 644,769.93	$ 231,190.18	$ 466,958.05	$ -0-
Maintenance and Operating Account	81,165.14	231,190.18	-0-	-0-	307,822.21	4,533.11
Total	$134,543.44	$ 231,190.18	$ 644,769.93	$ 231,190.18	$ 774,780.26	$ 4,533.11
Ninth Project						
Berkshire Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 172,774.78	$ -0-	$ 172,774.78	$ -0-
Total	$ -0-	$ -0-	$ 172,774.78	$ -0-	$ 172,774.78	$ -0-
Tenth Project						
Cance, Pierpont and Moore						
Revenue Account	$ 46,642.20	$ -0-	$ 495,766.53	$ 57,457.56	$ 484,951.17	$ -0-
Maintenance and Operating Account	50,467.10	57,457.56	-0-	-0-	71,634.51	36,290.15
Total	$ 97,109.30	$ 57,457.56	$ 495,766.53	$ 57,457.56	$ 556,585.68	$ 36,290.15
GRAND TOTALS	$475,530.69	$1,353,610.09	$4,684,959.71	$1,353,610.09	$5,014,686.69	$145,803.71

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATIONAL INSTITUTE OF HEALTH						
INSTITUTIONAL ALLOWANCE	007700	.00	.00	196.52	.00	196.52
CA-37083-01	009305	.00	.00	.00	.00	.00
GM 32100-02	009306	.00	.00	.00	.00	.00
GM-28618-04	009307	.00	.00	.00	.00	.00
GM-32100-01	009407	.00	.00	.00	.00	.00
GM-35906-01	009408	.00	.00	.00	.00	.00
GM-32152-01A1	009409	.00	.00	.00	.00	.00
GM-32152-02	009410	.00	.00	.00	.00	.00
GM-33170-03	009411	.00	.00	658.25	658.25	.00
GM-35906-02	009412	.00	.00	484.55	484.55	.00
GM-36120-02	009413	.00	.00	709.55	709.55	.00
GM-36162-02	009414	.00	.00	726.95	726.95	.00
GM-37986-02	009415	.00	.00	709.92	709.92	.00
GM-38156-02	009416	.00	.00	1,176.83	1,176.83	.00
EH-69-654-B	009417	.00	.00	150.69CR	150.69CR	.00
EH-69-655-A	009418	.00	.00	2,013.95	2,013.95	.00
EH-42125-01	009419	.00	.00	.00	.00	.00
MH-37507-02	009420	.00	.00	274.50	274.50	.00
MH-39681-01	009421	.00	.00	423.45	423.45	.00
AI-33410-01	009422	.00	.00	73.09	73.09	.00
AI-40034-01	009423	.00	.00	462.35	462.35	.00
GM-38567-02	009424	.00	.00	162.90CR	162.90CR	.00
GM-37083-02	009425	.00	.00	259.76	259.76	.00
GM-42799-01	009426	.00	.00	3,968.90	3,968.90	.00
GM-42610-01	009427	.00	.00	2,400.00	2,400.00	.00
GM-42665-01	009428	.00	.00	2,396.75	2,396.75	.00
MH-39681-02	009429	.00	.00	2,141.16	2,141.16	.00
EH-70-654-C	009430	.00	.00	13,790.88	13,790.88	.00
EH-70-655-B	009431	.00	.00	3,528.35	3,528.35	.00
MH-44131-01	009432	.00	.00	2,552.76	2,552.76	.00
GM-36120-03	009433	.00	.00	3,555.67	3,555.67	.00
GM-37986-03	009434	.00	.00	2,850.00	2,850.00	.00
AI-33410-02	009435	.00	.00	710.89	710.89	.00
HD-36162-03-A1	009436	.00	.00	616.36	616.36	.00
AI-40034-02	009437	.00	.00	511.49	511.49	.00
AP-42356-01	009438	.00	.00	2,007.67	2,007.67	.00
NIH AH 00654-04	009439	.00	.00	.00	.00	.00
NIH AH 00655-03	009440	.00	.00	.00	.00	.00
NIH GM 42610-02	009441	.00	.00	200.00	200.00	.00
GM-40062-01	009702	.00	.00	506.04	506.04	.00
NATIONAL INSTITUTE OF HEALTH *-	SUB-TOT	.00	.00	49,593.00	49,396.48	196.52
DEPARTMENT OF INTERIOR						
WP-26229-02	009701	657.99	.00	.37CR	657.62	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
WP-26346-01	009703	574.22	.00	.44CR	573.78	.00
WP-26454-01	009704	.00	7,100.00	2,500.00CR	3,787.98	812.02
WP-26453-01	009705	.00	6,600.00	2,509.00CR	3,390.12	709.88
DEPARTMENT OF INTERIOR	SUB-TOT	1,232.21	13,700.00	5,000.81CR	8,409.50	1,521.90
NSF FOUNDATION						
INSTITUTIONAL ALLOWANCE	009000	27,261.07	.00	.00	.00	27,261.07
SUMMER AND ACADEMIC YEAR	009100	.00	5,280.00	2,559.96CR	3,458.08	738.04CR
FACULTY EDUCATION ALLOWANCE	009200	.00	5,000.00	5,000.00CR	.00	.00
SENIOR FOREIGN SCIENTIST FELLOWSHIP	009201	2,344.42	.00	.00	2,344.42	.00
NSF FOUNDATION	SUB-TOT	29,605.49	10,280.00	7,559.96CR	5,802.50	26,523.03
NATIONAL DEFENSE GRADUATE						
FELLOWSHIPS	011100	.00	115.78	254,317.85	254,433.63	.00
NATIONAL DEFENSE GRADUATE	SUB-TOT	.00	115.78	254,317.85	254,433.63	.00
OFFICE OF EDUCATION						
OE-71-002221	061904	.00	.00	2,566.43	2,566.43	.00
OEG-0-8-003093-3093	068209	2,948.59	.00	.00	1,149.56	1,799.03
OEG-0-9-311104-3112 031A	068211	.00	15,900.00	7,500.00CR	7,002.52	1,397.48
OFFICE OF EDUCATION	SUB-TOT	2,948.59	15,900.00	4,933.57CR	10,718.51	3,196.51
FEDERAL FELLOWSHIP	SECT 03	33,786.29	39,995.78	286,416.51	328,760.62	31,437.96

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AMC FELLOWSHIP FUND	009895	1,614.00	25,250.00	.00	16,252.10	10,611.90
AMERICA THE BEAUTIFUL FELLOWSHIP	009901	.00	1,000.00	.00	1,000.00	.00
AMERICAN CHEMICAL SOCIETY PRF	009903	2,052.06	.00	.00	2,062.18	10.12CR
AMERICAN CHEMICAL SOCIETY PRF GRADUATE	009904	4,876.92	.00	.00	4,789.26	87.66
HAZEL STILLWELL BEST	009905	3,214.40	.00	.00	450.00	2,764.40
AMERICAN SOCIETY FOR ENGINEERING ED	009906	.00	10,000.00	2,800.00CR	6,118.48	1,081.52
CAMPBELL INSTITUTE FOR FOOD FELLOWSHIP	010002	1,000.00	.00	.00	.00	1,000.00
FORD FOUNDATION-ALLEN	010003	740.64	.00	.00	61.29	679.35
DEPT OF CHEMISTRY FELLOWSHIP FUND	010102	.06	.00	.06CR	.00	.00
GENERAL TELEPHONE AND ELECTRONICS	010300	42.12	.00	.00	13.56	28.56
GLASS CONTAINER	010302	16,423.42	10,560.00	.00	14,670.62	12,312.80
STAUFFER CHEMICAL FELLOWSHIP	010400	4,038.40	.00	3,176.53CR	861.87	.00
IBM POLYMER SCIENCE AND ENGINEERING	010910	.00	6,865.00	6,865.00CR	.00	.00
MICROBIOLOGY PRE-DOCTORAL FELLOWSHIP	011000	85.37	.00	.00	.00	85.37
MISUBISHI FELLOWSHIP	011050	123.08	.00	.00	50.00	73.08
NATIONAL ASSN OF INDEPENDENT SCHOOLS	011080	.00	6,000.00	.00	4,921.57	1,078.43
NORTHEAST UTILITIES FELLOWSHIP AWARD	011503	.00	5,000.00	.00	3,360.78	1,639.22
OWENS ILLINOIS FELLOWSHIP	011505	415.59	2,400.00	.00	415.35	2,400.24
PAINT RESEARCH INSTITUTE	011600	4,344.76	6,000.00	1,000.00CR	1,155.77	8,188.99
PLASTICS INSTITUTE OF AMERICA	011602	2,023.11	2,500.00	2,907.20CR	1,615.91	.00
POLYMER SCIENCE AND ENGINEERING	011605	.00	19,677.42	18,221.15	8,888.22	29,010.35
SCHOOL OF EDUCATION FELLOWSHIP ACCOUNT	011660	.00	1,000.00	.00	999.90	.10
TEXACO FELLOWSHIP IN CHEMISTRY	011700	6,639.13	.00	.00	1,373.20	5,265.93
WISE POTATO CHIP	011800	235.71	.00	.00	76.30	159.41
WOODROW WILSON NATIONAL FELLOWSHIP	011900	228.30	.00	.00	.00	228.30
XEROX GRADUATE FELLOWSHIP	012000	1,022.48	5,300.00	5,699.41CR	623.07	.00
MISCELLANEOUS FELLOWSHIPS	SECT 04	49,119.55	101,552.42	4,227.05CR	69,759.43	76,685.49
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TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AMERICAN AGRICULTURIST FOUNDATION INC	012660	.00	200.00	.00	.00	200.00
AMERICAN SOCIETY OF MECHANICAL ENGINEERS	012700	400.00	200.00	.00	.00	600.00
ANONYMOUS SCHOLARSHIP 2	013000	.00	3,181.22	.00	.00	3,181.22
FREDERICK A AND MARGARET S BAKER	013200	.00	100.00	.00	100.00	.00
BAND SCHOLARSHIP FUND	013300	309.45	429.00	10.00	50.00	698.45
GEORGE H BARBER SCHOLARSHIP	013500	26,000.00	99,017.59	56,165.00	175,057.00	6,125.59
DON ALLAN MEMORIAL SCHOLARSHIP FUND	013800	.00	1,000.00	.00	500.00	500.00
BORDEN AGRICULTURAL SCHOLARSHIP	013900	600.00	.00	.00	300.00	300.00
NATHANIEL I BOWDITCH SPEAKING CONTEST	014300	355.00	.00	.00	.00	355.00
CMAA SCHOLARSHIP	014800	.00	300.00	.00	.00	300.00
COMBUSTION ENGINEERING	015300	555.00	500.00	.00	500.00	555.00
CHARLES M COX	015500	450.00	.00	30.00	330.00	150.00
LOTTA CRABTREE SCHOLARSHIP	015700	367.00	.00	.00	.00	367.00
RACHEL DEITZ SCHOLARSHIP	016000	300.00	300.00	.00	300.00	300.00
ENGINEERING ALUMNI SCHOLARSHIP	016300	3,195.69	2,782.24	216.36CR	2,656.73	3,104.84
RICHARD FESSENDON SCHOLARSHIP	016601	.00	.00	.00	.00	.00
FLORISTS GARDNERS CLUB OF WESTERN MASS	016900	100.00	100.00	.00	100.00	100.00
ELIZABETH G FITZGERALD SCHOLARSHIP	017000	.00	1,125.00	.00	1,000.00	125.00
FRENCH GOVERNMENT FUND	017300	254.00	.00	.00	.00	254.00
GRADUATE SCHOOL SCHOLARSHIP AND LOAN	018300	243.66	.00	.00	.00	243.66
HOOD SCHOLARSHIP	018500	1,042.00	1,200.00	.00	1,200.00	1,042.00
INDUSTRIAL ENGINEERING SCHOLARSHIP	018700	135.44	.00	.00	.00	135.44
HOWARD JOHNSON SCHOLARSHIP	018900	.00	1,500.00	.00	1,500.00	.00
KNORR SWISS INSTITUTE PRODUCTS	019400	.00	600.00	.00	200.00	400.00
MASSACHUSETTS MERCHANDISING SCHOL FUND	019800	.00	.00	500.00	500.00	.00
MERWIN MEMORIAL SCHOLARSHIP	020200	726.55	2,500.00	.00	1,250.00	1,976.55
MISCELLANEOUS SCHOLARSHIPS	020300	3,117.49	136.12	.00	200.00	3,053.61
NATIONAL FOOD BROKERS	020400	.00	1,000.00	.00	.00	1,000.00
NEW YORK FARMERS SCHOLARSHIP	020500	.00	.00	.00	.00	.00
NON PROF EMPLOYEE'S OUTING SCHOLARSHIP	020505	.00	115.02	.00	100.00	15.02
NURSING SCHOLARSHIP FUND	020590	.00	41,566.00	.00	13,409.00	28,157.00
PETER PAN BUS LINE SCHOLARSHIP	020600	200.00	.00	.00	200.00	.00
PROGRAM ABLE POLAROID SCHOLARSHIP	021000	8,500.00	42,500.00	3,490.04CR	43,321.29	4,188.67
RESTAURANT AND HOTEL SCHOLARSHIP	021400	5.00	6,300.00	.00	5,550.00	755.00
RESTAURANT AND HOTEL ADMINISTRATION FD	021401	.00	100.00	.00	.00	100.00
JOSEPH C RICH FUND	021500	150.00	100.00	.00	100.00	150.00
RUBBER CHEMISTRY SCHOLARSHIP	021501	47.67	1,000.00	173.01CR	874.66	.00
SEARS ROEBUCK COMPANY	021700	.00	600.00	.00	600.00	.00
SAGA SCHOLARSHIP	021800	.00	.00	.00	.00	.00
ILENE SHARON SAVOL SCHOLARSHIP	021802	100.00	699.16	.00	799.16	.00
ALFRED P SLOAN SCHOLARSHIP	021850	6,700.00	.00	.00	6,120.04	579.96
SPRINGFIELD PANHELLENIC SCHOLARSHIP	022000	200.00	.00	.00	200.00	.00
STERLING SURREY SCHOLARSHIP	022100	970.00	.00	.00	50.00	920.00
STOCKBRIDGE SENATE SCHOLARSHIP	022200	4,135.88	.00	.00	3,900.00	235.88
STOUFFER RESTAURANT CORP	022300	250.00	1,250.00	.00	250.00	1,250.00
THERRIEN SCHOLARSHIP	022400	.00	1,000.00	.00	.00	1,000.00
TRAFFIC FINES SCHOLARSHIP	022500	29,379.70	20,960.00	.00	150.00	50,189.70
UNIVERSITY SCHOLARSHIPS	023100	13,563.99	.00	20.00	.00	13,583.99
VINCENT WILBUR	023250	.00	500.00	.00	500.00	.00
I R WILSON	023300	19.25	.00	.00	.00	19.25
WORCESTER COUNTY POULTRY ASSN	023500	195.31	.00	.00	.00	195.31

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
UNIV OF MASS FOUNDATION						
MARGARET FITZ BARNES	013700	.00	100.00	.00	100.00	.00
CLASS OF 1913	014900	.00	100.00	.00	100.00	.00
CLASS OF 1919	015100	.00	.00	.00	.00	.00
VINCENT GOLDTHWAIT SCHOLARSHIP	017700	600.00	.00	.00	600.00	.00
H F JONES SCHOLARSHIP	019100	300.00	.00	.00	300.00	.00
CHARLES POWELL SCHOLARSHIP	020900	.00	350.00	.00	350.00	.00
ROBERT WESTMEN SCHOLARSHIP	023200	.00	400.00	.00	400.00	.00
UNIV OF MASS FOUNDATION	SUB-TOT	900.00	950.00	.00	1,850.00	.00
SCHOLARSHIPS	SECT 05	103,468.08	233,811.35	52,845.59	263,717.88	126,407.14
TOTAL FELLOWSHIPS AND SCHOLARSHIPS. SECT.	03-05	186,373.92	375,359.55	335,035.05	662,237.93	234,530.59

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
ATHLETIC RESERVE FUND	025300	33,307.48	66.93	22.92	.00	33,397.33
ATHLETIC RESERVE FUND SPECIAL	025302	242,837.15	17,249.86	3,000.00CR	.00	257,087.01
ATHLETIC TRUST FUND	025500	25,231.80	24,133.62	436,500.34	473,851.36	12,014.40
BOARDING HALL TRUST	025900	132,401.94	146,763.92CR	5,244,499.79	5,156,437.09	73,700.72
ORCHARD HILL RESIDENTIAL COLLEGE	034202	1,045.40	425.00	4,250.00	3,495.77	2,224.63
RECREATIONAL ACTIVITY FEE	035200	.00	3,182.00	.00	5.00	3,177.00
RESIDENCE HALL TRUST FUND	035602	143,633.07	1,295,523.28	3,148.17	1,321,528.46	120,776.06
RESIDENCE HALL TELEPHONE TRUST FUND	035603	66,765.97	192,359.14	.00	220,268.34	38,856.77
SOUTHWEST RESIDENTIAL COLLEGE	037703	722.11	828.00	5,000.00	5,632.73	917.38
STUDENT AUTOMATIC SERVICE FUND	038300	102,299.08	101,312.16	102,437.32CR	23,317.78	77,856.14
STUDENT HEALTH SERVICE AMHERST	038500	67,363.64	1,045,813.33	35,269.08	1,148,430.66	15.39
STUDENT HEALTH SERVICE RESERVE PERMANENT	038600	26,000.00	.00	.00	.00	26,000.00
STUDENT HEALTH SERVICE RESERVE FUND ED	038602	21,200.00	.00	2,500.00CR	.00	18,700.00
STUDENT HOUSING DEPOSIT	038630	.00	463,600.00	.00	.00	463,600.00
CAMPUS CENTER FOOD SERVICE	038700	29,759.57	675,899.59	2,021.36CR	683,457.99	20,179.81
CAMPUS CENTER BUILDING AMORTIZATION	038800	619,209.72	554,331.80	222,107.34CR	126,824.40	824,609.78
CAMPUS CENTER GENERAL FUND	038900	.00	474,677.92	253,069.13	761,419.97	33,672.92CR
CAMPUS CENTER PETTY CASH CONTRA ACCOUNT	039000	18,700.00	.00	4,000.00	.00	22,700.00
CAMPUS CENTER RESERVE FUND	039300	77,161.65	.00	77,161.65CR	.00	.00
CAMPUS CENTER UNIVERSITY STORE	039500	37,306.94	2,495,858.52	100,347.86CR	2,339,318.91	93,498.69
SUMMER COUNSELING TRUST FUND	039600	62,099.83	129,995.86	38,182.20CR	82,104.36	71,809.13
AUXILIARY ENTERPRISES **********	SECT 06	1,707,045.35	7,328,493.09	5,438,001.70	12,346,092.82	2,127,447.32

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
ASSOCIATE ALUMNI CLEARING ACCOUNT	025000	270.00	7,715.00	4,752.50CR	2,792.50	440.00
ATHLETIC CLEARING ACCOUNT	025200	.00	522,015.50	442,015.50CR	80,000.00	.00
ATHLETIC REVOLVING ACCOUNT	025400	.00	.00	.00	.00	.00
BOARDING HALL CLEARING	025700	.00	5,832,315.09	5,218,074.59CR	614,240.50	.00
CAMPUS STUDENT DAMAGE	026450	.00	648.00	.00	648.00	.00
FIRST NATIONAL BANK OF AMHERST	029003	.00	2,292.64	.00	2,417.64	125.00CR
FIRST NATIONAL BANK OF BOSTON CLEARING	029005	.00	1,900,000.00	.00	1,900,000.00	.00
GENERAL FEDERAL GRANT	030701	.00	8,199,659.65	50,790.90CR	8,198,868.75	50,000.00CR (a)
MASS ASSEMBLY LOAN PAYMENT FUND	032900	1,302.43	4,450.66	729.09	3,386.43	3,095.75
REIMBURSABLE GRANTS TRUST FUND	035404	.00	.00	84,361.96CR	.00	84,361.96CR (b)
RESIDENCE HALL REFUNDS	035606	.00	57,645.00	10,027.50	67,672.50	.00
TRAVEL ADVANCE REVOLVING CONTRA	040300	10,000.00	.00	.00	.00	10,000.00
UNPAID TRUST FUND CHECKS	040902	2,028.90	469.52	.00	.00	2,498.42
NIH CASH	070000	.00	3,230,000.00	3,222,871.03CR	.00	7,128.97
NIH CASH OFFICE OF EDUCATION	070001	.00	370,000.00	364,757.18CR	.00	5,242.82
NSF CASH RECEIPT	083300	.00	1,365,000.00	1,365,000.00CR	.00	.00
CLEARING ACCOUNT	SECT 07	13,601.33	21,492,211.06	10,741,867.07CR	10,870,026.32	106,081.00CR
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(a) Receivable from State Treasurer
(b) Receivable from Federal Government

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
UNRESTRICTED CURRENT FUNDS						
ADMINISTRATIVE ALLOWANCE FEDERAL PROGRAM	024000	26,895.58	9,577.39	33,661.29	44,862.66	25,271.60
ADVANCEMENT OF ASTRONOMY	024102	6,802.69	4,694.00	.00	8,769.19	2,727.50
GEORGE W ALDERMAN MUSEUM FUND	024300	382.76	.00	.00	.00	382.76
AMERICAN CYANAMID FUND	024400	100.00	.00	100.00CR	.00	.00
ANONYMOUS TRUST FUND 2	024500	589.13	.00	.71CR	588.42	.00
NICHOLAS APPERT CHAIR	024700	9,809.50	7,500.00	.00	9,999.60	7,309.90
ART ACQUISITION FUND	024900	293.45	20.00	.00	.00	313.45
JAMES BUTLER PLAQUE	026050	.00	106.25	.00	.00	106.25
BUDD COMPANY	026100	939.55	250.00	857.33CR	332.22	.00
CAMPUS STUDY FUND	026400	7,000.00	.00	7,000.00CR	.00	.00
COLLEGIATE ED DISADVANTAGE STUDENTS	026600	4,512.68	21,091.31	18,701.68CR	5,822.00	1,080.31
CENTER FOR APPLIED RESEARCH MALAWI	026702	.00	.00	10,000.00	1,814.59	8,185.41
LAWRENCE S DICKENSON MEMORIAL	028700	100.00	.00	.00	.00	100.00
EQUINE RESEARCH TRUST FUND	028910	650.50	1,095.00	100.00	796.13	1,049.37
EQUITATION FUND	029001	25.53	1,087.65	.00	327.70	785.48
FLORICULTURE FUND	029100	150.47	.00	138.47CR	12.00	.00
FLOWER GROWER FUND	029300	51.13	.00	.00	.00	51.13
FORD FOUNDATION ALAMPUR-DRIVER	029600	.00	9,320.28	.00	6,690.29	2,629.99
GENERAL ELECTRIC PITTSFIELD	030700	4,257.14	14,746.20	.00	16,708.42	2,294.92
GENERAL SERVICE TRUST FUND	031000	107,709.76	691,964.42	4,500.00	539,376.81	264,797.37
GIFT OF STOCKBRIDGE CLASS OF 1965	031300	575.55	.00	.00	59.68	515.87
GOAT BULLETIN BC FUND	031302	50.00	.00	50.00CR	.00	.00
GRADUATE STUDENT PROGRAM FUND	031305	.00	15,389.00	13.17CR	2,058.19	13,317.64
HENDERSON FUND	031401	.00	.00	7,000.00	46.00	6,954.00
HEALTH INSURANCE RESERVE FUND	031404	.00	5,886.77	.00	1,705.52	4,181.25
HOKKAIDO MASSACHUSETTS FUND	031500	51.32	.00	51.32CR	.00	.00
HONORS PROGRAM TRUST	032000	1.17	.00	1,118.58	990.44	129.31
HORTICULTURE RESEARCH CENTER FUND	032100	20,893.07	12,207.20	193.80	10,318.87	22,975.20
IBM RESEARCH ASSOCIATES	032500	4.81	.00	4.81CR	.00	.00
KELLOGG FOUNDATION	032600	15,279.25	26,828.00	13.17CR	28,234.22	13,859.86
MARTIN LUTHER KING FUND	032601	925.00	.00	.00	.00	925.00
DANIEL J KLEIN LECTURESHIP FUND	032602	76.37	150.00	1.37CR	225.00	.00
MAINTENANCE OF ACADEMIC PROJECTS	032801	.00	.00	49,809.99	49,809.99	.00
MARINE STATION RENOVATION ACCOUNT	032820	.00	.00	.00	.00	.00
MARINE STATION OPERATING ACCOUNT	032822	.00	.00	.00	.00	.00
MAKEPEACE FUND	032830	.00	5,500.00	.00	4,910.38	589.62
HORACE MANN AWARD	032840	.00	.00	2,000.00	2,000.00	.00
MASS FOOD SERVICE EDUCATIONAL COUNCIL FD	033100	1,371.51	.00	.00	.00	1,371.51
MOTOR VEHICLE REGISTRATION ACCOUNT	033500	17,274.82	15,920.00	.00	14,727.82	18,467.00
MUNICIPAL BUILDING OFFICIALS CONFERENCE	033600	901.41	282.47	.00	251.44	932.44
NATIONAL DISTILLERS FUND	033800	100.00	.00	100.00CR	.00	.00
NATIONAL STARCH AND CHEMICAL CORP	033801	383.97	1,000.00	.00	459.48	924.49
NDEA TEACHERS SERVICE CANCELLATION	033900	6,792.28	7,699.03	14,491.31CR	.00	.00
NSF SCIENCE DEVELOPMENT PROPOSAL FUND	034000	586.00	.00	.00	360.14	225.86
OCEAN SPRAY INCOME ACCOUNT	034101	374.50	228.50	.00	.00	603.00
NURSERY SCHOOL LABORATORY	034120	2,275.08	8,050.00	6,300.00CR	1,422.31	2,902.77
NURSING ADMINISTRATION TRUST FUND	034200	700.00	.00	.00	.00	700.00
OCEAN SPRAY CRANBERRY FUND	034201	2,890.00	450.00	.00	.00	3,340.00
PRESIDENTS TRUST FUND	034900	646.32	725.00	.00	403.03	968.29

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
RECORDING INDUSTRIES MUSIC PERFORMANCE	035150	.00	916.61	.00	.00	916.61
REHABILITATION AND HOME CARE	035210	.00	1,200.00	.00	.00	1,200.00
RESTAURANT AND HOTEL MANAGEMENT	035700	4,790.99	250.00	411.50CR	695.84	3,933.65
HOTEL & RESTAURANT ADMIN. FIELD TRIP	035710	.00	.00	411.50	.00	411.50
TREVOR ROBINSON BIOCHEMISTRY	036600	.00	400.00	.00	141.98	258.02
SAGA DEVELOPMENT FUND	036850	.00	3,000.00	.00	1,350.00	1,650.00
SCHOOL OF EDUCATION SPECIAL TRUST	037200	24,687.39	684.44	108,869.14	134,240.97	.00
SCHOOL OF EDUCATION SPECIAL TRUST-70-71	037250	.00	.00	.00	.00	.00
SCHOOL OF ENGINEERING EQUIPMENT	037300	303.75	.00	.00	.00	303.75
SPERRY AND HUTCHINSON LECTURE FUND	037900	416.84	.00	.00	.00	416.84
STOCKBRIDGE CLASS OF 1966	038202	3,197.98	133.70	.00	45.80CR	3,377.48
STRENGTH TRAINING CLINIC FUND	038203	53.10	.00	.00	.00	53.10
SUMMER WORKSHOP IN EDUCATION	039701	11,743.67	12,977.39	.00	22,627.93	2,093.13
TRUST FUND INTEREST	040500	59,251.01	279,563.54	5,445.87CR	168,080.15	165,288.53
UNDERGRADUATE OUTSTANDING TEACHING AWARD	040602	2,018.58	5,000.00	18.58CR	3,000.00	4,000.00
UNIVERSITY FUND	040700	8,878.07	9,984.15	1,202.75CR	7,941.11	9,718.36
UNIFORM RESALE FUND AP	097400	263.43	44.00	15.00	106.76	215.67
UNRESTRICTED CURRENT FUNDS	SUB-TOT	358,027.11	1,175,922.30	163,077.26	1,092,221.48	604,805.19
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DEPARTMENTAL SERVICE FUNDS						
AGRICULTURAL ENGINEERING SERVICE FUND	024202	14.85	200.00	1,000.00	204.11	1,010.74
BIOCHEMISTRY SERVICE FUND	025503	571.39	.00	500.00	676.61	394.78
BOTANY SERVICE FUND	025802	76.79	.00	4,450.00	1,085.38	3,441.41
CHEMICAL ENGINEERING SERVICE TRUST FUND	026900	10,499.83	13,344.35	3,250.00	18,603.78	8,490.40
CIVIL ENGINEERING SERVICE FUND	026903	399.69	558.07	3,600.00	2,334.16	2,223.60
COLLEGE OF AGRICULTURAL SERVICE FUND	028000	44.59	.00	310.00	165.60	188.99
COLLEGE OF ARTS AND SCIENCES SERVICE FD	028100	690.24	220.00	2,400.00	856.90	2,453.34
COOPERATIVE EXTENSION ACTIVITIES FUND	028330	.00	1,679.50	.00	1,454.03	225.47
DEAN OF STUDENTS SERVICE FUND	028600	2.31	32.43	200.00	165.34	69.40
DEPARTMENT OF CHEMISTRY SERVICE FUND	028800	17,584.99	6,204.34	3,750.00	10,858.18	16,681.15
ENVIRONMENTAL HEALTH AND SAFETY	028810	.00	.00	30.00	.00	30.00
DEPARTMENT OF PUBLIC HEALTH SERVICE	028850	.00	.00	60.00	59.89	.11
GOVERNMENT SERVICE	028900	4,952.72	.00	1,250.00	3,296.97	2,905.75
FORESTRY AND WILDLIFE MANAGEMENT	028901	378.80	2.75	500.00	332.92	548.63
ENGLISH SERVICE FUND	028903	2,324.82	.00	5,000.00	5,403.76	1,921.06
FOOD SCIENCE AND TECH SERVICE FUND	029400	1,229.39	5.10	500.00	1,411.35	323.14
GEOLOGY SERVICE FUND	030800	370.03	5,003.65	750.00	5,062.93	1,060.75
GERMAN DEPARTMENT FUND	031100	1,495.71	212.00	3,500.00	2,272.15	2,935.56
GRADUATE SCHOOL SERVICE FUND	031400	155.21	.00	327.00	455.41	26.80
HISTORY SERVICE FUND	031403	722.17	6.75	3,780.00	2,801.96	1,706.96
HOME ECONOMICS	031700	2,036.76	1,578.00	99.00	1,136.13	2,577.63
INDUSTRIAL ENGINEERING FUND	032400	627.03	3.00	500.00	622.20	507.83
LABOR CENTER SERVICE	032605	5,937.23	4,995.97	568.07	3,987.68	7,513.59
MARINE SERVICE FUND	032802	450.79	.00	.00	1.00	449.79
MATHEMATICS SERVICE FUND	033103	4,748.42	.00	1,000.00	1,506.70	4,241.72
MECHANICAL AND AEROSPACE ENGINEERING FD	033105	3,028.82	3,059.79	4,321.69	6,324.98	4,085.32

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
MICROBIOLOGY SERVICE FUND	033300	2,252.60	436.10	2,855.00	4,374.74	1,168.96
PHILOSOPHY SERVICE FUND	034402	5,241.19	6.00	3,000.00	5,436.40	2,810.79
PHYSICS SERVICE FUND	034403	8,352.94	12,384.28	6,000.00	16,187.07	10,550.15
PHYSIOLOGY SERVICE FUND	034406	1,000.00	.00	1,000.00CR	.00	.00
PLACEMENT OFFICE SERVICE FUND	034500	.00	830.00	31.93CR	16.83	781.24
PLANT AND SOIL SCIENCES	034600	1,075.93	.00	2,500.00	2,172.83	1,403.10
POLYMER AND ENGINEERING SERVICE FUND	034602	992.24	600.00CR	2,480.00	1,437.83	1,434.41
PSYCHOLOGY SERVICE FUND	035100	389.91	570.00	15,092.86	12,168.42	3,884.35
ROMANCE LANGUAGE SERVICE FUND	036700	2,796.02	.00	500.00	903.41	2,392.61
SCHOOL OF BUSINESS ADMINISTRATION	036900	10,666.22	3,827.82	6,700.04	6,570.14	14,623.94
SCHOOL OF EDUCATION SERVICE FUND	037100	6,108.60	8,599.53	12,639.43	24,986.60	2,360.96
SCHOOL OF ENGINEERING SERVICE FUND	037500	2,785.53	.00	16,094.20	9,372.48	9,507.25
SCHOOL OF NURSING FUND	037700	429.54	.00	260.00	404.27	285.27
SCHOOL OF PHYSICAL EDUCATION	037701	13.37	.00	260.00	80.13	193.24
SOCIOLOGY AND ANTHROPOLOGY SERVICE FD	037702	1,337.04	816.00	1,750.00	1,900.15	2,002.89
SPEECH SERVICE FD	037802	942.16	6,939.00	7,500.00	14,237.77	1,143.39
STAFF PHYSICIANS SERVICE FUND	038200	950.00	125.00	.00	134.47	940.53
VET AND ANIMAL SCIENCE FUND	041002	3,072.20	45.00	2,138.81	1,823.47	3,432.54
ZOOLOGY SERVICE FUND	041202	2,399.23	.00	10,500.00	4,305.13	8,594.10
DEPARTMENTAL SERVICE FUNDS	SUB-TOT	109,147.30	71,084.43	130,884.17	177,592.26	133,523.64
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OPERATING ACCOUNTS						
AID/APT 281	023900	69,907.38	.00	24,761.14	30,116.01	64,552.51
AID/CSD 399	023901	13,732.58	368.33	.00	9,675.65	4,425.26
AID/APT 437	023902	26,891.84	.00	19.67	2,648.00	24,263.51
ENGINEERING RESEARCH INSTITUTE	029000	1,947.94	781.25	275.00	224.44	2,779.75
IAIM OPERATING	032202	8,651.42	.00	2,636.35	5,921.60	5,366.17
IEP OPERATING	032204	157.34	.00	.00	.00	157.34
OCD PS 64 151 OPERATING	034002	6,611.62	.00	6,000.00CR	300.00	311.62
OCD PS 65 87 OPERATING	034003	29,742.95	.00	.00	.00	29,742.95
PRI OPERATING	034401	1,656.21	3,100.00	15,825.12	11,103.86	9,477.47
RESEARCH TRUST FUND	035505	30,864.22	415.44	350,458.53	45,134.72	336,603.47
DR STRONG OPERATING	038204	.00	.00	.00	.00	.00
UPWARD BOUND AMHERST 1967	041110	1,591.43	.00	.00	.00	1,591.43
UPWARD BOUND AMHERST 1968	041120	14,391.14	.00	.00	.00	14,391.14
UPWARD BOUND AMHERST 1969	041150	1,981.73	.00	454.27	.00	2,436.00
UPWARD BOUND AMHERST 1970	041180	.00	.00	6,040.25	.00	6,040.25
NONR 3357 OPERATING	067203	.00	.00	.00	509.25	509.25CR
N 00014-68-A-0146-14	067414	10,571.63	.00	20,051.61	19,225.17	11,398.07
NSF GP 14690 OPERATING	090001	.00	.00	5,000.00	4,970.37	29.63
NSF GP 15282 OPERATING	090022	.00	.00	4,250.00	.00	4,250.00
OPERATING ACCOUNTS	SUB-TOT	218,699.43	4,665.02	423,771.94	129,829.07	517,307.32
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
GENERAL PURPOSE FUND	SECT 08	685,873.84	1,251,671.75	717,733.37	1,399,642.81	1,255,636.15
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HAROLD W PRIZE FUND	026501	24.00	770.00	.00	.00	794.00
HOWARD LEBOW MEMORIAL SCHOLARSHIP	032604	.00	154.57	.00	154.57	.00
OREANA MERRIAM EDUCATIONAL FUND	033201	1,588.02	35.00	.00	.00	1,623.02
METAWAMPEE FUND	033202	1,400.00	.00	100.00CR	250.00	1,050.00
TRE FRANK R. SHAW FUND.	035120	.00	808.00	.00	.00	808.00
LAWRENCE D RHODES	035403	45.00	.00	.00	.00	45.00
JOHN F THOMPSON MEMORIAL FUND	040001	100.00	.00	.00	.00	100.00
BARRY LEE WOLK MEMORIAL	041109	30.00	.00	.00	.00	30.00
GIFTS & GRANTS PENDING TRUSTEE ACTION	SECT 09	3,187.02	1,767.57	100.00CR	404.57	4,450.02
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BOOK REPLACEMENT FUND	025701	362.00	2,703.30	.00	1,599.68	1,465.62
FORD FOUNDATION LIBRARY FUND	029700	462.15	.00	.43CR	461.72	.00
LEONARD HARWITZ LIBRARY FUND	032102	1,500.00	.00	.50CR	1,499.50	.00
HOTEL & RESTAURANT LIBRARY FUND	032200	306.29	.00	.00	50.80	255.49
J. F. K. MEMORIAL FUND	032550	.00	.00	.00	.00	.00
LANDSCAPE ARCHITECTURE LIBRARY FUND	032603	1,834.15	124.00	.00	.00	1,958.15
FRIENDS OF THE LIBRARY	032680	.00	.00	300.00	.00	300.00
LIBRARY FUND	032700	1,943.82	3,854.08	124,826.71	125,054.48	5,570.13
MORRILL SCIENCE LIBRARY FUND	033700	125.00	.00	.00	.00	125.00
BRUCE WARNER LIBRARY FUND	041102	109.15	.00	.00	.00	109.15
LIBRARY FUNDS	SECT 10	6,642.56	6,681.38	125,125.78	128,666.18	9,783.54
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
INSTITUTIONAL ALLOWANCE GENERAL	010800	77,097.78	4,080.22	189,422.83	161,989.45	108,611.38
ALUMNI TRUST FUND	024303	.00	59,621.44	38,436.19	85,316.61	12,741.02
BOTANY XEROX SERVICE FUND	025800	4,676.21	3,417.84	.00	3,342.82	4,751.23
BROAD JUMP	026050	.00	22,500.00	.00	509.08	21,990.92
CENTER STUDY EDUCATIONAL INNOVATIONS	026660	.00	3,720.00	959.00	4,109.39	569.61
CSEI TITLE III ACTION CTR BELLOWS FALLS	026661	.00	1,000.00	.00	986.62	13.38
CSEI EDUCATION & CULTURAL CENTER	026662	.00	625.00	.00	.00	625.00
CSEI GLOBE NEWSPAPER COMPANY	026663	.00	2,522.00	.00	1,933.95	588.05
MONTPELIER PUBLIC SCHOOLS	026664	.00	1,140.00	.00	823.72	316.28
CSEI TITLE III ACTION CENTER / STAMFORD	026665	.00	1,600.00	28.97CR	1,644.27	73.24CR
CSEI NETWORK	026666	.00	.00	245.00	.00	245.00
COMPUTER TRUST FUND	028300	76,696.64	140,925.88	634,423.11	733,563.16	118,482.47
ENGINEERING HYBRID COMPUTER TRUST	028902	.00	.00	901.29	877.67	23.62
INNOVATIONS FILMS FUND	032501	12,149.77	31,905.53	26.34CR	47,937.49	3,908.53CR
MATHEMATICS XEROX SERVICE FUND	033102	3,175.55	3,170.75	.00	3,642.50	2,703.80
RCS GENERAL	035550	.00	5,000.00	20,000.00	21,242.91	3,757.09
RCS RESEARCH COORDINATOR	035580	.00	.00	25,000.00	24,650.00	350.00
RCS GLASS SHOP	035600	665.63	3,220.42	.00	1,897.54	1,988.51
RCS CHEMICAL ANALYSIS	035601	2,785.33	6,705.60	236.83	8,735.08	992.68
UNIVERSITY COPY CENTER	040603	2,094.08	85,434.46	.00	86,082.68	1,445.86
UNIVERSITY PRESS COMMITTEE	041100	73,043.10	69,967.79	134,689.38	206,086.84	71,613.43
VOCATIONAL COUNSELING	041201	.00	2,084.67	.00	759.80	1,324.87
INST OE 72002221 A	061903	.00	.00	.00	.00	.00
BROAD JUMP	076050	.00	.00	.00	.00	.00
NSF INST GU 3448 ELECTRONICS	077120	.00	.00	.00	.00	.00
NSF INST GU 2844	087105	.00	.00	14,583.48	14,583.48	.00
NSF INST GU 3448 PRIOR YEAR LIABILITIES	087116	.00	.00	.00	.00	.00
NSF INST GU 3448 GLASS SHOP	087117	.00	.00	17,291.10	17,291.10	.00
NSF INST GU 3448 CHEMICAL ANALYSIS	087118	.00	.00	13,919.18	13,919.18	.00
NSF INST GU 3448 PHYSICS	087119	.00	.00	6,495.18	6,495.18	.00
NSF INST GU 3448 SECRETARIAT	087120	.00	.00	5,670.84	5,670.84	.00
NSF INST GRANT ELECTRONICS	087121	.00	.00	6,170.17	6,170.17	.00
NSF INST GU 3448	087122	.00	.00	.00	.00	.00
MISCELLANEOUS SERVICE FUNDS	SECT 11	252,384.09	448,641.60	1,108,388.27	1,460,261.53	349,152.43
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
ACADEMIC THEATRE	024100	2,436.93	15,388.43	3,265.00CR	13,456.29	1,104.07
ARCHOEOLOGY FIELD SCHOOL	024800	2,574.60	3,130.00	1,600.00	5,687.66	1,616.94
BAR REVIEW COURSE	025501	.00	2,090.00	.00	2,056.40	33.60
BOLOGNA SUMMER SEMINAR 1966	026000	2,167.55	.00	2,167.55CR	.00	.00
BOLOGNA SUMMER SESSION 1967	026002	897.15	.00	1,941.41CR	1,044.26CR	.00
BOLOGNA SUMMER SESSION 1968	026003	4,435.39	.00	3,391.13CR	1,044.26	.00
BOLOGNA SUMMER SESSION 1969	026005	10,041.30	110.00	.00	12,110.06	1,958.76CR
BOLOGNA SUMMER SESSION 1970	026006	.00	51,070.00	.00	39,640.00	11,430.00
CHAMBER MUSIC SUMMER 1970	026820	.00	27.00	1,500.00	1,454.40	72.60
COMMENCEMENT FUND	026902	21,414.74	77,615.50	.00	37,460.33	61,569.91
CUBAN REFUGEE	028400	.00	7,875.00	.00	7,500.00	375.00
DANFORTH FOUNDATION RESIDENCE	028500	369.50	.00	.00	89.25	280.25
FINE ARTS FEE ACCOUNT	029002	19,031.68	137,982.57	6,624.92CR	137,668.85	12,720.48
FOREIGN PROGRAMS	030401	1,264.68	150.00	12,291.36	321.25	13,384.79
FOREIGN PROGRAMS ADMINISTRATIVE	030402	.00	.00	588.72	588.72	.00
FOREIGN STUDENTS ADVISOR	030500	187.43	21.57	.00	209.00	.00
FREIBURG SUMMER PRO-SUMMER-1970	030550	.00	8,000.00	.00	5,491.55	2,508.45
FREIBURG 1968	030603	649.00	140.00CR	194.00CR	315.00	.00
FREIBURG 1969	030604	551.84	35.00CR	350.64CR	166.20	.00
FREIBURG 1970	030605	1,870.00	642.00	21,500.00	23,803.52	208.48
FREIBURG TRUST 1970-1971	030606	.00	5,000.00	.00	849.75	4,150.25
GRADUATE STUDENT SENATE	031301	1,420.44	3,572.00	906.23	2,159.72	3,738.95
GRADUATE STUDENT GENERAL FEE	031303	11,012.20	2,535.00	13,302.20CR	.00	245.00
IDENTIFICATION CARD	032300	10,202.46	21,437.00	1,450.77CR	15,288.39	14,900.30
JAPANESE SUMMER 1967	032503	45.84	.00	.00	.00	45.84
JAPANESE SUMMER 1969	032504	.00	10,450.00	3,759.50CR	6,552.09	138.41
JAPANESE SUMMER INSTITUTE 1970	032505	.00	.00	.00	.00	.00
LAW ENFORCEMENT EDUCATIONAL	032607	7,150.00	800.00	.00	7,150.00	800.00
MADRID SUMMER 1968	032701	19.18	.00	905.07	924.25	.00
MADRID 1969	032702	7,473.35	.00	1,063.18CR	6,410.17	.00
MADRID 1970	032703	.00	28,820.00	2,150.00	27,189.61	3,780.39
MARCHING BAND	032850	.00	624.25	5,055.00	2,937.40	2,741.85
MASS LEGISLATIVE INTERNSHIP	033000	2,744.64	35,213.65	.00	28,224.80	9,733.49
NANTUCKET	033702	1,124.61	1,345.59	.00	2,192.01	278.19
OPERETTA GUILD VALUABLE MEMBER	034203	25.00	.00	.00	25.00	.00
OXFORD SUMMER 1968	034302	3,032.77	.00	3,077.77CR	45.00CR	.00
OXFORD SUMMER 1969	034303	8,533.25	2,850.00CR	1,173.35	6,856.60	.00
OXFORD SUMMER 1970	034304	.00	99,690.00	.00	86,072.39	13,617.61
PAU SUMMER	034320	.00	.00	.00	.00	.00
PAU SUMMER 1970	034321	.00	28,945.00	1,000.00	23,891.35	6,053.65
PLANT PATHOLOGY GRADUATE	034501	50.00	.00	.00	.00	50.00
ROTC ARMY COMMUTATION UNIFORM	035400	1,498.23	3,519.00	.00	4,251.92	765.31
AF COMMUTATION UNIFORM	035402	1,051.20	4,954.00	.00	3,698.83	2,306.37
RESIDENCE HALL CULTURAL ENRICHMENT	035604	7,679.96	.00	89.08	7,653.56	115.48
ROOM SECURITY DEPOSIT	036800	.00	.00	.00	.00	.00
STUDENT UNION RSO	039100	148,734.28	870,465.10	166,518.05	989,085.13	196,632.30
STUDENT ACTIVITIES SUMMER	039700	27,297.39	28,982.20	3,296.00	40,303.65	19,271.94
COLLEGE WORK STUDY	069500	19,540.87	134,091.92	580,729.94	681,713.29	52,649.44
STUDENT PROGRAMS	SECT 12	326,527.46	1,581,521.78	758,714.73	2,231,403.39	435,360.58

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
ABBOTT	042800	4,926.88	.00	.00	.00	4,926.88
AGWAY ENGINEERING	042803	4,367.81	.00	.00	2,627.71	1,740.10
AGWAY CRANBERRY	042902	232.86	650.00	.00	352.92	529.94
AGWAY DLA FUND	042903	.00	2,650.00	.00	2,373.18	276.82
AGWAY FENNER	042904	.00	2,000.00	.00	727.72	1,272.28
AGWAY PLANT SCIENCE	042905	5,000.00	.00	.00	3,001.20	1,998.80
AGWAY PLANT & SOIL SCIENCES	043000	5.16	.00	.08CR	5.08	.00
AQUACULTURAL RESEARCH	043105	2,000.00	.00	.00	1,931.67	68.33
BEECHNUT FUND	043201	.00	6,000.00	.00	486.19	5,513.81
BIOZONICS CORP	043350	.00	1,500.00	.00	2,152.40	652.40CR
BORDEN CHEMICAL	043400	.00	4,596.20	.00	1,401.31	3,194.89
BOURNE	043700	1,434.98	1,485.00	.00	903.55	2,016.43
CAPE COD	044100	17,702.00	6,000.00	.00	7,037.34	16,664.66
CARNATION	044500	508.78	.00	.00	252.74	256.04
CHEVRON CHEMICAL 1	045000	700.00	.00	.00	700.00	.00
CHEVRON CHEMICAL 2	045002	81.44	.00	.00	52.74	28.70
CHEVRON CHEMICAL 3	045200	378.61	.00	.00	29.85	348.76
HEUBLEIN	045250	.00	24,000.00	13.17CR	10,654.22	13,332.61
KIMBERLY CLARK MUELLER	045300	644.93	.00	.00	110.04	534.89
KIMBERLY CLARK LITSKY	045400	8,500.00	8,000.00	.00	7,718.37	8,781.63
COMMERCIAL FILTERS	045700	.00	.00	.00	.00	.00
CONSOLIDATED CIGAR	045902	4.01	.00	4.01CR	.00	.00
CORN INDUSTRIES	046300	531.65	.00	.00	234.00	297.65
CORN PRODUCTS FOOD TECHNOLOGY	046302	1,024.41	.00	.00	1,002.38	22.03
COX	047300	382.81	.00	358.91CR	23.90	.00
CSET NETWORK	047400	.00	.00	.00	.00	.00
CSEI EDUCATIONAL & CULTURAL	047405	.00	.00	.00	.00	.00
CSEI TITLE III ACTION CENTER BELLOWSFALL	047410	.00	.00	.00	.00	.00
CSEI TITLE III ACTION CENTER STANFORD	047415	.00	.00	.00	.00	.00
CSET GLOBE NEWSPAPER	047420	.00	.00	.00	.00	.00
DAIRY GENETICS	047800	4,357.05	1,965.00	25.00	4,974.35	1,372.70
FORD MOTOR	048601	.00	6,000.00	6,000.00CR	.00	.00
FURUKAWA RESEARCH	048610	239.00	.00	5,500.00	625.00	5,114.00
GENERAL ELECTRIC STEIN	048700	415.25	.00	.01CR	415.24	.00
GEIGY CHEMICAL CORP	048800	6,179.23	.00	.00	778.67	5,400.56
GEIGY CRANBERRY	048802	73.37	.00	.00	73.37	.00
GEIGY DOG TICK FUND	048803	.00	500.00	.00	.00	500.00
GEIGY FORESTRY	048804	1,000.00	.00	.00	39.95	960.05
GENERAL TIRE & RUBBER	048900	10,199.78	6,500.00	.00	2,590.06	14,109.72
HERCULES KARASZ	049511	.00	1,500.00	.00	.00	1,500.00
HOFFMAN LAROCHE 5	049803	.10	.00	.10CR	.00	.00
HOLYOKE WATER POWER	049902	.00	2,000.00	.00	.00	2,000.00
INDEPENDENT NAIL	050200	.00	2,410.00	.00	2,410.00	.00
KERATENE	050600	3,561.71	2,500.00	.00	1,868.66	4,193.05
LEDERLE FUND	050700	6,050.08	.00	.00	450.00	5,600.08
LEUCOSIS	050900	20,874.41	16,500.00	.00	20,722.41	16,652.00
LESTOIL PRODUCTS	051000	201.83	.00	.00	.00	201.83
MASS GOLFASSOCIATION	051102	440.00	60.00	.00	45.50	454.50
MASS HEART	051103	.00	4,973.00	1,271.00CR	3,808.97	206.97CR
MASTITIS	051400	241.26	.00	241.26CR	.00	.00
MECHANICAL ENGINEERING	051501	1,167.80	5,463.17	535.19CR	3,539.80	2,511.98

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
MERCK SHARP DOHME ANSELME	051502	817.30	.00	.00	817.30	.00
MEDICAL RESEARCH	051503	462.92	460.45	.00	29.30	894.07
MERCK SHARP DOHME MCEWEN	051550	.00	1,000.00	.00	.00	1,000.00
MILK CHECK	051800	306.13	.00	.00	49.80	256.33
MITRE CORP	051850	.00	5,885.29	.00	6,394.79	509.50CR
MITRE CORP. #2	051851	.00	5,008.80	57.94CR	10,828.96	5,878.10CR
MOBIL CHEMICAL	051900	214.75	.00	.00	114.87	99.88
MONSANTO CHEMICAL	052100	1,025.06	1,000.00	.00	930.22CR	2,955.28
MONSANTO HERBICIDE FUND	052101	.00	500.00	.00	.00	500.00
MONSANTO POLYMER	052102	4,359.81	3,000.00	.00	1,577.39	5,782.42
NANTUCKET STUDY	052123	375.09	53.45	.00	377.86	50.68
NORTON	052600	636.02	.00	.00	29.12	606.90
NORWICH	052700	154.16	.00	.00	5.00	149.16
OYSTER RESEARCH	052800	208.12	.00	.00	208.12	.00
OCEAN SPRAY CRANBERRY	052900	21,717.83	10,000.00	.00	12,557.41	19,160.42
OLIN CORPORATION	052905	.00	1,000.00	.00	24.29	975.71
PFIZER	054900	4,511.24	.00	.00	.00	4,511.24
POLYMER SCIENCE & ENGINEERING	055200	4,273.89	23,000.00	2,700.00	13,444.80	16,529.09
POULTRY VACCINE	055400	5,047.26	5,657.40	.00	2,642.63	8,062.03
SHAWINIGAN RESINS	056900	428.70	.00	.00	428.70	.00
SHELL CHEMICAL	057100	3,967.24	.00	.00	1,126.51	2,840.73
SIRE EVALUATION	057300	128.00	.00	25.00CR	103.00	.00
SYLVANIA	058000	.00	.00	.00	.00	.00
TURFGRASS	058100	400.08	.00	.08CR	400.00	.00
T H CHEMICAL CRANBERRY	058102	1,076.38	.00	.00	640.95	435.43
T H CHEMICAL HERBICIDE	058103	194.00	.00	.00	181.39	12.61
TAKEDA CHEMICAL	058200	5,003.14	.00	.00	1,811.54	3,191.60
VANDERBILT CRANBERRY	058201	200.00	100.00	.00	200.00	100.00
UNION CARBIDE	058203	5,000.00	.00	5,000.00CR	.00	.00
UNIROYAL	058204	.00	1,000.00	.00	393.28	606.72
VEGETABLE CROPS	058400	3,009.17	1,500.00	.00	918.01	3,591.16
WARNER BURNS TOAN LUNDE RESEARCH	058420	.00	3,000.00	.00	2,962.69	37.31
WEED BIOLOGY	058430	.00	500.00	.00	.00	500.00
WESTFIELD RIVER PAPER COMPANY	058550	.00	400.00	.00	341.80	58.20
SPONSORED RESEARCH	SECT 13	166,943.49	170,223.76	5,331.75CR	143,799.78	188,035.72
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FACULTY RESEARCH GRANTS	023800	42,613.14	308.92	80,736.69	84,319.71	39,339.04
U OF M SPONSORED RESEARCH	SECT 14	42,613.14	308.92	80,736.69	84,319.71	39,339.04
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AGRICULTURAL DEVELOPMENT COUNCIL	042702	677.56	.00	.00	677.56	.00
AMERICAN CANCER SOCIETY P554	043003	.00	25,069.00	3,830.75CR	23,135.78	1,898.53CR
AMERICAN PETROLEUM INSTITUTE 155	043100	672.47	.00	.00	123.50	548.97
AMERICAN POTASH	043102	1,937.34	.00	.00	1,536.10	401.24
BERKSHIRE COUNTY	043300	.00	.00	.00	.00	.00
BOSTON MARKET GARDEN SEED IMPROVEMENT	043500	1,848.09	500.00	.00	568.70	1,779.39
BUREAU OF GOVERNMENT RESEARCH	043900	644.59	9,730.00	.00	4,649.76	5,724.83
CAM WESTCHESTER	043950	.00	2,600.00	.00	.00	2,600.00
CAMPBELL INSTITUTE FOOD RESEARCH	044000	1,017.45	.00	.00	589.77	427.68
CARNEGIE FUND	044600	4,276.26	.00	.00	1,707.99	2,568.27
CHRONIC RESPIRATORY DISEASE	044700	3,479.81	.00	.00	137.67	3,342.14
COLUMN RESEARCH	045600	1,000.00	.00	.00	999.78	.22
CONSERVATION FOUNDATION NEW YORK	045900	.00	.00	.00	.00	.00
COOP FISH PROJECT 3601-09-13	046100	2,887.50	20,000.00	.00	17,764.14	5,123.36
RESEARCH CORP COTTRELL MCGILL	046700	643.02	.00	.00	210.15	432.87
MASSACHUSETTS DEPT. OF EDUCATION-JOHNSON	047850	.00	.00	.00	712.50	712.50CR
EDUCATIONAL TRNG PROGRAM - STATE OF FLA	048000	.00	4,800.00	.00	4,591.94	208.06
CLINICAL PROFESSOR FOR STATE OF FLORIDA	048001	.00	.00	.00	.00	.00
STATE OF FLORIDA TRAINING PROGRAM	048002	.00	.00	.00	.00	.00
RESEARCH CORP ENGINEERING	048100	1,542.09	.00	.00	.00	1,542.09
ESSO EDUCATION FOUNDATION	048200	.00	40,145.00	13.17CR	32,214.99	7,916.84
FRANKLIN COUNTY PUBLIC HOSPITAL	048602	485.00	138.57	.00	623.57	.00
FRASCH FOUNDATION	048603	931.79	8,000.00	.00	7,406.29	1,525.50
FORD FOUNDATION 690-0511	048604	.00	94,900.00	13.17CR	84,879.76	10,007.07
GRAYSON FOUNDATION	049200	.00	7,000.00	.00	1,274.57	5,725.43
GULF OIL	049300	6,796.40	.00	.00	3,552.89	3,243.51
JOHN W HILL FOUNDATION	049600	14,484.67	14,000.00	.00	18,515.42	9,969.25
JOSEPH HILL FOUNDATION	049602	589.05	.00	.00	270.00	319.05
HOLYOKE TRUST	050000	683.77	.00	.00	634.38	49.39
IRRADIATION	050400	18.64	.00	18.64CR	.00	.00
C F KETTERING WOLF	050502	.00	.00	81.50	81.50	.00
KETTERING 642 CRAM	050503	3,301.91	81,356.22	21,741.21	99,331.72	7,067.62
KETTERING 648 MICRO	050504	10,027.45	.00	401.22CR	9,441.50	184.73
CAROL BUTTENWIESER LOEB	051001	1,000.00	.00	.00	309.46	690.54
LINK	051002	1,500.00	.00	.00	1,499.86	.14
LOWELL MODEL CITIES	051005	.00	20,250.00	42.14CR	17,695.13	2,512.73
LOWER PIONEER VALLEY REGIONAL	051101	400.00	14,223.00	800.00CR	7,710.03	6,112.97
EVALUATION OF ADULT BASIC ED. PROG.	051104	.00	13,750.00	.00	12,111.88	1,638.12
MASS MERCHANDISING	051200	4,560.40	2,014.00	500.00CR	1,905.57	4,168.83
MASS SOCIETY PROMOTING AGRICULTURE	051202	500.03	.00	.00	487.23	12.80
MASS SOC PROMOTING AGRICULTURE WALTHAM	051203	.00	3,500.00	.00	614.00	2,886.00
MASS TUBERCULOSIS HEALTH LEAGUE	051301	.00	3,450.00	450.00CR	2,998.68	1.32
MASS DIVISION WATER POLLUTION CONTROL	051450	.00	10,950.00	.00	11,088.46	138.46CR
MASS DIV WATER POLLUTION WATER CRAFT EXH	051451	.00	10,000.00	.00	10,138.46	138.46CR
MASS DIV WATER POLLUTION BOTTOM DEPOSIT	051452	.00	10,000.00	.00	10,813.27	813.27CR
MASS NURSERYMENS	051500	1,533.61	.00	.00	928.53	605.08
MEDICAL CARE RESEARCH	051504	2,559.80	18,219.47	.00	13,451.76	4,477.76
MERCK COMPANY	051505	.00	5,000.00	.00	.00	5,000.00
CHARLES E MERRILL	051650	.00	22,533.00	.00	66.53	22,433.47
MONTPELIER PUBLIC SCHOOLS	051740	.00	.00	.00	.00	.00
NATIONAL TUBERCULOSIS	052200	53.33	.00	4.37	26.70	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATURAL RESOURCES	052300	853.55	1,983.33	.00	1,546.49	1,290.39
N E DISTRIBUTIVE EDUCATION	052305	.00	5,899.05	.00	5,071.05	828.00
N E REGIONAL COMMISSION	052306	.00	10,000.00	.00	1,460.00	8,540.00
N Y FLORISTS CLUB	052400	174.00	.00	.00	171.26	2.74
NEW WORLD FOUNDATION	052501	.00	10,000.00	7,417.96CR	2,582.04	.00
N E B HIGHER EDUCATION	052502	4,946.07	4,819.80	.00	9,048.26	717.61
PROJ OF COUNTY POP MASS THROUGH 1983	052503	.00	10,000.00	4,500.00CR	4,600.00	900.00
PLANNED PARENTHOOD LEAGUE MASS	052901	538.60	.00	.00	461.22	77.38
POPULATION COUNCIL M67-116	053001	25.13	.00	4.88CR	20.25	.00
PRF AMERICAN CHEMICAL	053100	7,653.97	.00	5,573.00	11,266.78	1,960.19
PETROLEUM RESEARCH FOUNDATION 500 A 4	053300	3,231.49	7,560.00	1,260.00CR	5,055.37	4,476.12
PETROLEUM RESEARCH FOUNDATION 575 A 5	053500	2,107.80	8,000.00	1,360.34CR	6,426.66	2,320.80
PETROLEUM RESEARCH FOUNDATION 598 A 2	053700	9.04	.00	.00	.00	9.04
PETROLEUM RESEARCH FOUNDATION 973 A 4	054100	127.50	.00	.00	16.41	111.09
PETROLEUM RESEARCH FOUNDATION 1637 A 1	054300	139.24	.00	.00	.00	139.24
PETROLEUM RESEARCH FOUNDATION 2865 A 5	054400	3,612.23	7,200.00	1,213.17CR	6,710.99	2,888.07
PETROLEUM RESEARCH FOUNDATION 2371 A 5	054600	11.60	.00	.19CR	11.41	.00
PETROLEUM RESEARCH FOUNDATION 1946 A1 3	054700	15.13	.00	15.13CR	.00	.00
PETROLEUM RESEARCH FOUNDATION 2179 A1 4	054800	4,686.73	9,000.00	1,500.00CR	4,826.55	7,360.18
PETROLEUM RESEARCH FOUNDATION 2914 A 5	054802	7,235.94	4,200.00	728.97CR	10,649.34	57.63
PETROLEUM RESEARCH FOUNDATION 3357 A1 3	054803	3,485.91	7,848.00	1,308.00CR	2,104.95	7,920.96
PETROLEUM RESEARCH FOUNDATION 3551 A1 4	054804	5,646.81	7,560.00	1,260.00CR	8,825.95	3,120.86
PETROLEUM RESEARCH FOUNDATION 3556 A 3	054810	1,946.38	7,500.00	1,250.00CR	6,271.10	1,925.28
PETROLEUM RESEARCH FOUNDATION 3398 A 6	054811	4,016.65	8,000.00	1,334.00CR	7,997.23	2,685.42
PETROLEUM RESEARCH FOUNDATION 4362 AC5,6	054812	.00	11,160.00	1,260.00CR	4,166.74	5,733.26
RESEARCH FOUNDATION N Y FUND	055610	.00	300.00	.00	.00	300.00
RESEARCH SERVICE AGRICULTURE	055700	4,377.39	495.00	.00	60.38	4,812.01
RESOURCES FOR THE FUTURE	055800	10,198.35	.00	28.97CR	7,019.19	3,150.19
ROCKFELLER FOUNDATION 67054	056101	.00	8,400.00	.00	8,400.00	.00
FORD FOUNDATION 700-0143	056105	.00	44,000.00	28.97CR	19,137.16	24,833.87
SALMONELLA GHS FUND	056400	10,795.96	.00	.00	2,868.69	7,927.27
SEARS ROEBUCK	056600	54.60	.00	54.60CR	.00	.00
SHELL CRANBERRY	057200	742.68	.00	.00	410.44	332.24
A.P. SLOAN BR 973-2	057401	.00	6,498.35	847.61CR	31.45	5,619.29
ALFRED P SLOAN RESEARCH FELLOWSHIP	057402	100.00	.00	.00	100.00	.00
ALFRED P SLOAN BR993	057403	5,565.15	.00	.00	2,150.16	3,414.99
ALFRED P SLOAN BR1191	057404	7,000.00	8,050.00	1,078.97CR	5,310.20	8,660.83
ALFRED P SLOAN BR1192	057405	550.00	.00	.00	501.30	48.70
STEARNS	057800	910.90	500.00	.00	874.55	536.35
U OF STATE OF NEW YORK	058202	.00	3,800.00	.00	1,903.10	1,896.90
TITLE 1 CONSORTIUM	058205	.00	3,000.00	473.00CR	764.50	1,762.50
U/CONN. NO. 5171-0102-090-S7	058206	.00	.00	.00	1,428.00	1,428.00CR
WHITEHALL	058600	4,760.00	.00	.00	4,323.27	436.73
WILDLIFE MANAGEMENT	058700	314.58	1,250.00	.00	807.65	756.93
NONPROFIT ORGANIZATIONS & FOUNDATIONS	SECT 15	165,854.80	639,108.79	8,434.91CR	562,857.57	233,671.11

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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATIONAL INSTITUTE HEALTH						
HD-00204-02	070202	.00	.00	405.94	405.94	.00
HD-00204-03	070203	.00	.00	41,849.61	41,849.61	.00
NIH HD 00204-04	070204	.00	.00	30.00	30.00	.00
AHI-69-589-C-A	070605	.00	.00	11,946.61	11,946.61	.00
AHI-69-589-C-B	070606	.00	.00	11,905.16	11,905.16	.00
NIH AHI 70-589 (D) A	070607	.00	.00	2,168.12	2,168.12	.00
NIH AHI 70-589 (D) B	070608	.00	.00	1,463.50	1,463.50	.00
NT-131	070702	.00	.00	21,198.62	21,198.62	.00
AA-4-70-086-02	070703	.00	.00	20,765.00	20,765.00	.00
NPG-367-01	070901	.00	.00	17,398.72	17,398.72	.00
NU-00367-02	070903	.00	.00	8,764.79	8,764.79	.00
MH-06244-14	072706	.00	.00	359.99	359.99	.00
MH-06244-15	072707	.00	.00	76,871.99	76,871.99	.00
NIH MH 06244-16	072708	.00	.00	.00	.00	.00
MH-06400-12	072905	.00	.00	290.21CR	290.21CR	.00
MH-06400-13	072906	.00	.00	8,383.06	8,383.06	.00
MH-06400-14	072907	.00	.00	14,161.02	14,161.02	.00
MH-11823-01-A1	073301	.00	.00	34,650.08	34,650.08	.00
NIH MH 11823-02	073302	.00	.00	.00	.00	.00
PHT-7-43-B-68	074402	.00	.00	3,061.87	3,061.87	.00
PHT-7-43-C-69	074403	.00	25.00	15,142.64	15,167.64	.00
NIH AH 00743-04	074404	.00	.00	.00	.00	.00
AP-00069-01	075201	.00	.00	16,047.39	16,047.39	.00
AI-00226-07	075906	.00	.00	3,103.03	3,103.03	.00
AI-00226-08	075907	.00	.00	36,265.27	36,265.27	.00
NIH AI 00226-09	075908	.00	.00	.00	.00	.00
GM-01301-03	077403	.00	.00	34.10	34.10	.00
GM-08494-04	081204	.00	.00	3,024.63	3,024.63	.00
GM-08494-05	081205	.00	.00	16,304.14	16,304.14	.00
NATIONAL INSTITUTE HEALTH *-	SUB-TOT	.00	25.00	365,015.07	365,040.07	.00
NATIONAL SCIENCE FOUNDATION						
GZ-0861	085505	.00	12,950.00	616.72CR	12,333.28	.00
GZ-1220	085904	.00	146,000.00	70,242.59CR	73,274.51	2,482.90
GZ-1510	086200	.00	11,000.00	469.94CR	7,216.28	3,313.78
NSF GZ 1620	086404	.00	5,000.00	.00	1,440.00	3,560.00
GW-2768	087101	.00	.00	.00	.00	.00
GW-2976	087305	.00	.00	263.52	263.52	.00
GW-3681	087610	.00	35,000.00	2,096.10CR	32,395.56	508.34
GW-4072	087807	.00	17,000.00	1,076.77CR	13,380.19	2,543.04
GW-4086	087808	.00	17,000.00	1,560.43CR	13,474.06	1,965.51
GE-4766	087900	.00	.00	.00	.00	.00
GY-4622	087906	.00	.00	61.88	61.88	.00
GW-5135	088010	.00	11,000.00	236.06CR	11,113.74	349.80CR

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
GY-5393	088105	.00	8,000.00	2,824.08CR	5,175.92	.00
GY-5825	088201	.00	5,000.00	375.69CR	2,864.58	1,759.73
GY-6011	088213	.00	7,000.00	422.03CR	5,732.92	845.05
GY-7245	088319	.00	6,000.00	8.89CR	359.26	5,631.85
GY-7297	088335	.00	11,000.00	88.54CR	4,181.54	6,729.92
GP-9111	089450	.00	.00	26.80	26.80	.00
GP-9213	089500	.00	.00	.00	.00	.00
NATIONAL SCIENCE FOUNDATION	SUB-TOT	.00	291,950.00	79,665.64CR	183,294.04	28,990.32
OTHER AGENCIES						
DAHC-20-69-C-0-0240	063505	.00	34,401.56	7,698.44	42,084.97	15.03
DAHC 20-70-C-0323	063506	.00	.00	14,000.00	13,344.65	655.35
NASA-NSG-T-137	066200	18,175.34	31,250.00	.00	47,557.79	1,867.55
OCD-PS-65-87	068002	7,184.72	.00	.00	4,054.49	3,130.23
PC-51-930	068500	.00	.00	1,410.32	2,210.32	800.00CR
P.C. 42-0916	068501	.00	38.20	4,000.00	3,925.79	112.41
MESPU WEST VIRGINIA	069215	.00	15,000.00	.00	14,872.18	127.82
VRA-442-T-69	069305	.00	.00	2,320.43	2,320.43	.00
SPA-442-T-70	069306	.00	.00	6,419.30	6,419.30	.00
OTHER AGENCIES	SUB-TOT	25,360.06	80,689.76	35,848.49	136,789.92	5,108.39
OFFICE OF EDUCATION						
OEG-1-6-061877-1528	068203	.00	.00	.00	.00	.00
OEG-1-7-061877-3804	068207	.00	.00	.00	.00	.00
OEG-1-8-061877-0006-058	068208	.00	70,420.00	61,041.30CR	17,436.27	8,057.57CR
OEG-0-9-059051-3803-721	068213	.00	.00	10,888.71	10,888.71	.00
OEG-0-9-059053-3805-721	068214	.00	.00	4,295.78	4,295.78	.00
OEG-0-9-311877-4430-010	068215	.00	20,050.00	30,000.00CR	36,981.77	46,931.77CR
OEG-0-9-311303-4551-031	068216	.00	29,988.00	1,916.97CR	16,525.47	11,545.56
OE-6-19-087	068605	.00	.00	.00	.00	.00
OEG-0-8-080255-2554-044	069205	3,817.70	8,463.49	8,719.15CR	3,562.04	.00
OEG-0-8-080719-2435	069206	1,502.21	2,765.77	4,267.98CR	.00	.00
OEC-0-8-089023-3312-010	069208	8.89	43,114.61	43,123.50CR	.00	.00
OEG-0-9-310538-2217-725	069210	.00	.00	25,001.06	25,001.06	.00
OEG-0-9-311359-2147-725	069211	.00	.00	119,115.17	119,113.06	2.11
OEG-0-9-311694-2175-722	069212	.00	.00	40,565.69	40,565.69	.00
OEG-0-9-316008-2455-725	069213	.00	30.90	54,747.46	54,778.36	.00
OEG-0-9-313128-3593-725	069214	.00	.00	9,884.82	9,884.82	.00
OEG 0-70-3828	069217	.00	.00	.00	1,758.00	1,758.00CR
OFFICE OF EDUCATION	SUB-TOT	5,328.80	174,832.77	115,429.79	340,791.03	45,199.67CR

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
DEPARTMENT OF INTERIOR						
WP-00012-01	065203	27,084.69	.00	.00	20,434.45	6,650.24
DI-14-17-0007-277G	065603	.00	.00	.00	.00	.00
USDI-14-17-007-653G	065604	962.38	.00	203.18CR	759.20	.00
WP-00077-05	065810	18,641.00	22,115.00	5,529.86	26,713.69	19,572.17
USDI IT2-WP-267-01	065851	.00	.00	.00	.00	.00
WP-00077-03	074803	1,354.49	.00	1,354.49CR	.00	.00
WP-00077-04	074804	14,178.97	.00	5,721.46CR	7,371.96	1,085.55
DEPARTMENT OF INTERIOR	SUB-TOT	62,221.53	22,115.00	1,749.27CR	55,279.30	27,307.96
FEDERAL GRANTS AND CONTRACTS TRAINING	SECT 16	92,910.39	569,612.53	434,878.44	1,081,194.36	16,207.00
NIH RC-461	065900	6,611.00	.00	.00	.00	6,611.00
NIH RC-764	066100	8,965.00	.00	.00	.00	8,965.00
FEDERAL GRANTS AND CONTRACTS-FACILITIES	SECT 17	15,576.00	.00	.00	.00	15,576.00

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATIONAL INSTITUTE OF HEALTH						
RH-00607-01	070103	.00	.00	.00	.00	.00
NATIONAL INSTITUTE OF HEALTH	SUB-TOT	.00	.00	.00	.00	.00
NATIONAL SCIENCE FOUNDATION						
GZ-705	085402	.00	.00	3,907.93	3,907.93	.00
GY 4956	087907	.00	.00	1,902.82	1,902.82	.00
GY-4957	087908	.00	.00	50.51	50.51	.00
GY-6207	088220	.00	.00	7,851.49	7,851.49	.00
GY 6612	088304	.00	.00	7,080.00	7,080.00	.00
NSF GY 7765	088425	.00	.00	.00	.00	.00
NSF GY 7788	088427	.00	.00	.00	.00	.00
NSF G4 8059	088502	.00	.00	.00	.00	.00
GP-10240	089770	.00	.00	.00	.00	.00
GP-10431	089806	.00	.00	11,988.29	11,988.29	.00
GK-11379	089901	.00	.00	201.79	201.79	.00
NSF GP 18387	090064	.00	.00	.00	.00	.00
NATIONAL SCIENCE FOUNDATION	SUB-TOT	.00	.00	32,982.83	32,982.83	.00
OTHER AGENCIES						
DA ARO-D-31-124-G752	064002	3,934.86	.00	.00	867.94	3,066.92
AEC NSE 16-68	064203	.00	.00	.00	.00	.00
OTHER AGENCIES	SUB-TOT	3,934.86	.00	.00	867.94	3,066.92
OFFICE OF EDUCATION						
OEG 0-0-310001-0036-339	068217	.00	.00	.00	11,769.00	11,769.00CR
OE 92-000815	068505	.28	.00	.28CR	.00	.00
OE 92-000816	068506	.00	.00	.00	.00	.00
OEG 0-9-310080-0791-314	068507	.00	64,400.30	.00	64,396.77	3.53
OEG 0-9-310081-0792-314	068508	.00	12,869.00	.00	12,869.00	.00
OEG 0-8-031077-0791-314	069209	63.90	.00	.00	63.90	.00
OFFICE OF EDUCATION	SUB-TOT	64.18	77,269.30	.28CR	89,098.67	11,765.47CR
FEDERAL GRANTS AND CONTRACTS EQUIPMENT	SECT 18	3,999.04	77,269.30	32,982.55	122,949.44	8,698.55CR

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
MASS REHABILITATION SPEECH	060301	.00	7,892.72	4.88	7,897.60	.00
AID AFR 437	060900	14,193.45	140,000.00	10,164.52CR	128,063.18	15,965.75
AID AFR 281 U	061300	14,232.48	436,198.20	49,378.60CR	378,446.22	22,605.86
OE 77-002221 EDUCATIONAL OPPORTUNITY	061900	.00	.00	424.00CR	424.00CR	.00
NEOG 160-1	061901	.00	.00	.00	.00	.00
NEOG 160-02	061905	.00	.00	39.35CR	39.35CR	.00
OE 72-002221 B	061906	.00	.00	8,132.84	8,132.84	.00
OE 77-002221 FY70	061907	.00	3,879.75	406,950.88	410,830.63	.00
B 7-31-0285-C1-1	061908	.00	.00	.00	.00	.00
USDA 12-05-300-122	062002	.00	.00	.00	.00	.00
DA ARO D 162	063604	.00	.00	6,284.86	6,284.86	.00
88-08-68-C-48-FLT	063803	.00	.00	.00	.00	.00
USDC OSTS-11-20	065901	6,168.19	.00	371.03	5,876.46	662.76
DC OSTS-12-20-6800	065902	.00	35,999.09	7,340.88CR	28,346.08	312.13
DC OSTS 12 20 6801	065903	.00	.00	.00	17.44	17.44CR
DC OSTS 12 20 6803	065904	.00	.00	.00	94.69	94.69CR
DC OSTS 12 20 6804	065905	.00	.00	.00	.00	.00
DC OSTS 12 20 6805	065906	.00	.00	.00	.00	.00
DC OSTS 12 20 6807	065907	.00	.00	.00	.00	.00
DC OSTS 12 20 6817	065908	.00	.00	.00	200.00	200.00CR
DC OSTS 12 20 6819	065909	.00	.00	.00	.00	.00
DC OSTS 12 20 6821	065910	.00	.00	.00	.00	.00
DC OSTS 12 20 6814	065911	.00	.00	.00	.00	.00
DC OSTS 69-12-20-69100	065915	.00	118,594.97	23,129.91CR	75,214.42	20,250.64
DC OSTS 69 12 20 69101	065916	.00	.00	.00	577.81	577.81CR
DC OSTS 69 12 20 69102	065917	.00	.00	13.17CR	6,609.52	6,622.69CR
DC OSTS 69 12 20 69103	065918	.00	.00	.00	9,068.60	9,068.60CR
DC OSTS 69 12 20 69104	065919	.00	.00	.00	.00	.00
DC OSTS 69 12 20 69105	065920	.00	.00	.00	15,137.49	15,137.49CR
DC OSTS 69 12 20 69106	065921	.00	77.40	.00	6,001.08	5,923.68CR
DC OSTS 69 12 20 69107 A	065922	.00	.00	.00	1,130.85	1,130.85CR
DC OSTS 69-12-20-69201	065923	.00	.00	.00	1,944.80	1,944.80CR
DC OSTS 69 12 20 69202	065924	.00	.00	.00	.00	.00
DC OSTS 69 12 20 69203	065925	.00	.00	.00	.00	.00
DC OSTS 69 12 20 69204 A	065926	.00	.00	.00	.00	.00
DC OSTS 69 12 20	065927	.00	.00	.00	.00	.00
DC OSTS 69 12 20 69107 B	065928	.00	.00	.00	437.10	437.10CR
DC OSTS 69 12 20 69204 B	065929	.00	.00	.00	.00	.00
OEC 0-70-4232 (508)	068308	.00	.00	5,000.00	3,842.95	1,157.05
HEADSTART 1221-136	069400	21.00	.00	.00	.00	21.00
OEO UB AMHERST 68-69	069603	2,157.16	.00	454.27CR	1,702.89	.00
UB AMHERST DO 69-70	069604	.00	145,685.00	10,406.25CR	133,941.99	1,336.76
OEO UB BOSTON 68-69	069803	24,565.95	16,558.03	12,272.35CR	28,851.63	.00
UB BOSTON DO 69-70	069804	.00	86,973.05	6,254.44	87,089.43	6,138.06
OEO CG-8834	069903	43.35	.00	2,407.75	2,451.10	.00
OEG CG-8834 BO 68-69	069905	68,301.39	20.50	6,932.18CR	65,148.66	3,758.95CR
OEO CG-8834 CO 69-70	069906	.00	120,123.95	11,342.38CR	78,247.21	30,534.36
OEO CG-9932 AO 69-70	069970	.00	249,818.20	13,794.00CR	206,358.24	29,665.96
FEDERAL GRANTS CONTRACTS OTHER PURPOSES	SECT 19	129,682.97	1,361,820.86	289,714.92	1,697,482.42	83,736.23

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATIONAL INSTITUTE HEALTH						
CRD-249E-5-153	070200	.00	.00	.00	.00	.00
HD-00336-08	070305	.00	.00	2,778.76	2,778.76	.00
PHS 86-67-175	070402	.00	13,633.65	5,218.96CR	8,032.76	381.93
PH 22-68-39	070403	505.44	25,303.64	832.61CR	23,913.54	1,062.93
PH 22-68-39-2	070404	.00	.00	.00	.00	.00
69-2132	070405	.00	10,620.35	560.06CR	9,704.04	356.25
69-2151	070406	.00	38,225.56	5,814.82CR	32,081.20	329.54
NIH HEW OS-70-154	070407	.00	.00	1,000.00	500.00	500.00
HD-00745-05	070505	.00	.00	50.37	50.37	.00
AA-4-69-86-01	070701	.00	.00	12,443.93	12,443.93	.00
AA-4-69-086-02	070703	.00	.00	.00	.00	.00
FR-07048-03	070802	.00	.00	150.80CR	150.80CR	.00
FR-07048-04	070803	.00	.00	52,951.29	52,951.29	.00
NIH FR 07048-05	070804	.00	.00	3,599.89	3,599.89	.00
MH 01061-11	071504	.00	.00	.00	.00	.00
HD-01216-04	071704	.00	.00	.00	.00	.00
MH 01293-13	071906	.00	.00	6,853.17	6,853.17	.00
MH 01293-14	071907	.00	.00	28,640.94	28,640.94	.00
MH 03803-08	072305	.00	.00	1,323.49	1,323.49	.00
MH 03803-09	072306	.00	.00	7,608.52	7,608.52	.00
HD-03948-01	072401	.00	.00	15,382.62	15,382.62	.00
HD 04924-09	072509	.00	.00	18,407.96	18,407.96	.00
HD-04189-01	072601	.00	.00	5,301.75	5,301.75	.00
HD 04189-02	072602	.00	.00	3,524.88	3,524.88	.00
HD 04319-01	072801	.00	130.00	8,261.48	8,391.48	.00
NIH HD 04319-02	072802	.00	.00	974.48	974.48	.00
MH 15728-01	073501	.00	.00	1,725.00	1,725.00	.00
MH 16150-01	073601	.00	.00	104.49	104.49	.00
MH 16296-01	073701	.00	.00	31.13	31.13	.00
MH 16472-01	073801	.00	.00	12,110.58	12,110.58	.00
NIH MH 16472-02	073802	.00	.00	1,818.54	1,818.54	.00
MH 17268-01	073901	.00	.00	4,378.68	4,378.68	.00
MH 17345-01	074001	.00	.00	4,385.00	4,385.00	.00
MH 18107-01	074101	.00	.00	4,183.10	4,183.10	.00
MH 17395-01	074201	.00	.00	10,474.08	10,474.08	.00
MH 13155-02	074302	.00	.00	238.92	238.92	.00
MH 13155-03	074303	.00	.00	6,558.77	6,558.77	.00
MH 18182-01	074503	.00	.00	2,044.92	2,044.92	.00
MH 18575-01	074611	.00	.00	38.43	38.43	.00
NIH MH 18661-01	074621	.00	.00	1,300.00	1,300.00	.00
CC-00049-06	074706	.00	6.00	1,146.27	1,152.27	.00
CC-00049-07	074707	.00	.00	5,501.34	5,501.34	.00
UI 00091-10	074905	.00	.00	997.17	997.17	.00
UI 00092-07	075305	.00	.00	.00	.00	.00
UI 00092-08	075306	.00	.00	11,386.49	11,386.49	.00
CC-00267-02	075402	.00	.00	.00	.00	.00
CC-00267-03A	075403	.00	.00	6,557.32	6,557.32	.00
CC-00267-03B	075404	.00	.00	771.12	771.12	.00
AP-00791-01	075601	.00	.00	20,684.98	20,684.98	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AP-00791-02	075602	.00	.00	7,745.12	7,745.12	.00
CC-00354-01	076201	.00	.00	3,800.85	3,800.85	.00
UI 00145-05	076705	.00	.00	.00	.00	.00
UI 00145-06	076706	.00	.00	8,100.46	8,100.46	.00
EP-00656-03	076803	.00	.00	.00	.00	.00
UI 00148-04	076905	.00	.00	.00	.00	.00
UI 00148-05	076906	.00	.00	5,234.64	5,234.64	.00
FD-0053-06	076907	.00	.00	5,470.11	5,470.11	.00
UI 00159-04	077004	.00	.00	951.35	951.35	.00
UI 00159-05	077005	.00	.00	18,379.67	18,379.67	.00
NIH FD 00087-06	077006	.00	.00	2,815.66	2,815.66	.00
AI-00742-14	077105	.00	.00	122.49	122.49	.00
AI-00742-15	077106	.00	.00	33,708.76	33,708.76	.00
NIH MH AI 00742-16	077107	.00	.00	3,411.53	3,411.53	.00
UI 00687-03	077202	.00	.00	19.95	19.95	.00
UI 00687-04	077203	.00	.00	11,118.32	11,118.32	.00
NIH FD 00153-05	077204	.00	.00	816.60	816.60	.00
AM-01266-13	077306	.00	.00	18,924.85	18,924.85	.00
AM-01266-14	077307	.00	.00	8,826.78	8,826.78	.00
AI-04291-08	078706	.00	.00	4,586.50	4,586.50	.00
AI-04953-06	078805	.00	.00	269.45	269.45	.00
AI-05440-06	078906	.00	.00	10,589.65	10,589.65	.00
AI-05440-07	078907	.00	.00	6,967.53	6,967.53	.00
NB 07833-01	079201	.00	.00	11,012.19	11,012.19	.00
GM-05921-10	079305	.00	.00	.00	.00	.00
NB 08119-11	079306	.00	.00	13,636.76	13,636.76	.00
NB 8119-12	079307	.00	.00	19,459.15	19,459.15	.00
NB 03306-01-AI	079401	.00	.00	15,256.78	15,256.78	.00
NIH NS 08306-02	079402	.00	.00	2,674.36	2,674.36	.00
AI-06153-05	079505	.00	.00	361.57	361.57	.00
AI-06153-06	079506	.00	.00	15,935.56	15,935.56	.00
AI 06153-07	079507	.00	.00	1,702.00	1,702.00	.00
CA-06620-07	080506	.00	.00	3,475.69	3,475.69	.00
CA-06620-08	080507	.00	.00	6,459.44	6,459.44	.00
AI-06735-04	080604	.00	.00	294.53	294.53	.00
AI-06735-05	080605	.00	85.00	22,223.73	22,308.73	.00
NIH AI 06735-06	080606	.00	.00	1,090.05	1,090.05	.00
AI-06848-03	080802	.00	.00	136.37	136.37	.00
AI-06848-04	080803	.00	26.00	11,777.23	11,803.23	.00
NIH AI 06848-05	080804	.00	.00	2,254.88	2,254.88	.00
AI-07654-02	081002	.00	.00	.00	.00	.00
AI-07654-03	081003	.00	.00	14,867.76	14,867.76	.00
AI-07654-04	081004	.00	.00	10,186.82	10,186.82	.00
AI-08248-02	081102	.00	.00	5,995.86	5,995.86	.00
AI-08248-03	081103	.00	.00	5,681.70	5,681.70	.00
AI-08396-01	081201	.00	.00	23.40	23.40	.00
AI-08396-02	081202	.00	.00	8,668.50	8,668.50	.00
AI 08396-03	081203	.00	.00	1,169.59	1,169.59	.00
GM-08776-07	081305	.00	.00	.00	.00	.00
GM-08776-08	081306	.00	.00	5,622.49	5,622.49	.00
AI-08491-01	081401	.00	.00	22,072.75	22,072.75	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AI-08491-02	081402	.00	.00	14,576.93	14,576.93	.00
NS 08869-01	081611	.00	.00	3,954.83	3,954.83	.00
GM-09706-05	081704	.00	.00	8,700.27	8,700.27	.00
GM-09706-06	081705	.00	.00	14,071.82	14,071.82	.00
HE 11342-02	081802	.00	.00	457.80	457.80	.00
HE 11342-03	081803	.00	.00	17,324.67	17,324.67	.00
AM-12163-01	081901	.00	.00	.00	.00	.00
AM-12163-02	081903	.00	.00	7,762.42	7,762.42	.00
NIH AM 12163-03	081904	.00	.00	1,629.88	1,629.88	.00
AM-11157-02	082002	.00	.00	80.83	80.83	.00
AM-11157-03	082003	.00	.00	17,609.14	17,609.14	.00
NIH AM 11157-04	082004	.00	.00	7,625.00	7,625.00	.00
GM-11071-06	082105	.00	.00	1,202.67	1,202.67	.00
GM-11071-07	082106	.00	.00	26,417.15	26,417.15	.00
NIH GM 11071-08	082107	.00	.00	5,614.25	5,614.25	.00
GM-12064-05	082204	.00	.00	321.65	321.65	.00
GM-12064-06	082205	.00	.00	13,004.92	13,004.92	.00
GM 12064-07	082206	.00	.00	2,589.42	2,589.42	.00
HE 12527-01	082301	.00	.00	11,164.74	11,164.74	.00
NIH HE 12527-02	082302	.00	.00	3,905.91	3,905.91	.00
AM-13100-01	082401	.00	.00	13,183.45	13,183.45	.00
HE 13188-01	082411	.00	.00	8,783.08	8,783.08	.00
GM-13558-04	082504	.00	.00	4,778.14	4,778.14	.00
GM-13689-03	082603	.00	.00	3,076.53	3,076.53	.00
GM-14634-03	082703	.00	.00	8,205.63	8,205.63	.00
GM-14945-03	082803	.00	.00	2,243.20	2,243.20	.00
GM-14945-04	082804	.00	.00	16,036.57	16,036.57	.00
GM-14686-03	082903	.00	.00	7,210.12	7,210.12	.00
GM-15538-02	083002	.00	.00	2,062.28	2,062.28	.00
NATIONAL INSTITUTE HEALTH	SUB-TOT	505.44	88,030.20	830,455.34	916,360.33	2,630.65
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NATIONAL SCIENCE FOUNDATION						
GJ 60	083701	.00	193.80	16,112.52	16,306.32	.00
GA 390	084800	.00	.00	891.52	891.52	.00
GN 476	085102	12.70	2.50	.00	15.20	.00
GA 467	085103	.00	.00	1,563.83	1,563.83	.00
GN 435	085200	.00	.00	885.00	885.00	.00
GA 518	085304	.00	.00	803.02	803.02	.00
GK 1110	085802	.00	.00	6,381.80	6,381.80	.00
GK 1209	085903	.00	.00	137.19	137.19	.00
GK 1565	086304	.00	.00	2,907.38	2,907.38	.00
GA 1529	086403	.00	.00	8,229.65	8,229.65	.00
GS 1700	086405	.00	.00	1,433.83	1,433.83	.00
GS 1727	086406	.00	.00	10,812.98	10,812.98	.00
NSF GZ 1759	086407	.00	.00	397.00	397.00	.00
GK 1856	086705	.00	.00	192.36	192.36	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
GK 1907	086800	.00	.00	4,697.09	4,697.09	.00
GK 2065	086802	.00	.00	14,961.83	14,961.83	.00
GS 2103	086804	.00	.00	1,670.00	1,670.00	.00
GK 2230	086902	.00	.00	12,212.87	12,212.87	.00
GS 2449	086931	.00	.00	3,880.02	3,880.02	.00
GK 2606	087003	.00	.00	4,799.28	4,799.28	.00
GS 2746	087004	.00	.00	8,725.94	8,725.94	.00
GK 2781	087103	.00	.00	7,904.56	7,904.56	.00
GK 2801	087104	.00	.00	16,697.31	16,697.31	.00
GK 2982	087205	.00	.00	12,420.65	12,420.65	.00
GB 3334	087502	.00	.00	141.11	141.11	.00
GB 3591	087605	.00	.00	459.66CR	459.66CR	.00
GB 3615	087606	.00	.00	.00	.00	.00
GK 3651	087608	.00	.00	75.00	75.00	.00
GB 3863	087703	.00	.00	2,269.40	2,269.40	.00
GB 3884	087705	.00	.00	152.71	152.71	.00
GB 4147	087708	.00	.00	28.00	28.00	.00
GP 4283	087802	.00	.00	4,826.55	4,826.55	.00
GK 4556	087806	.00	.00	12,147.16	12,147.16	.00
GY 4709	087901	.00	19.04	6,349.98	6,369.02	.00
GK 4897	087909	.00	.00	6,428.22	6,428.22	.00
GK 4945	087910	.00	.00	6,069.36	6,069.36	.00
GB 5130	088007	.00	.00	893.69	893.69	.00
GP 5372	088102	.00	.00	7,735.38	7,735.38	.00
GB 5480	088104	.00	.00	1,587.80	1,587.80	.00
NSF GK 5569	088110	.00	.00	650.00	650.00	.00
NSF GK 5215	088150	.00	.00	536.36	536.36	.00
GK 5702	088160	.00	.00	1,911.63	1,911.63	.00
GP 6188	088209	.00	.00	464.41	464.41	.00
GP 6189	088210	.00	.00	2,301.10	2,301.10	.00
GP 6190	088211	.00	.00	4,293.66	4,293.66	.00
GB 6085	088212	.00	.00	41.20	41.20	.00
GP 6216	088214	.00	.00	2,821.81	2,821.81	.00
GB 6233	088215	.00	.00	2,496.95	2,496.95	.00
GB 6570	088216	.00	.00	569.84	569.84	.00
GB 6182	088217	.00	.00	3,449.44	3,449.44	.00
GP 6338	088302	.00	.00	2,716.58	2,716.58	.00
GB 6691	088306	.00	.00	5,114.45	5,114.45	.00
GB 6715	088307	.00	.00	4,306.71	4,306.71	.00
GP 6942	088308	.00	.00	1,354.40	1,354.40	.00
GB 6845	088309	.00	.00	3,713.66	3,713.66	.00
GP 7037	088310	.00	.00	193.30	193.30	.00
GB 6847	088311	.00	.00	3,539.79	3,539.79	.00
GB 7191	088316	.00	.00	4,632.75	4,632.75	.00
GB 7077	088317	.00	.00	1,476.16	1,476.16	.00
GB 7225	088318	.00	.00	3,347.86	3,347.86	.00
GB 7274	088330	.00	.00	6,986.74	6,986.74	.00
GP 7367	088350	.00	.00	680.89	680.89	.00
GB 7456	088356	.00	.00	9,582.46	9,582.46	.00
GP 7575	088420	.00	.00	127.50	127.50	.00
GP 7664	088422	.00	.00	3,789.64	3,789.64	.00

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
GP 7774	088423	.00	.00	11,088.45	11,088.45	.00
GP 7793	088424	.00	.00	6.89	6.89	.00
GP 7828	088426	.00	.00	9,071.19	9,071.19	.00
GP 7897	088430	.00	.00	6,187.09	6,187.09	.00
GP 7904	088440	.00	.00	23,992.34	23,992.34	.00
GP 7912	088450	.00	.00	.00	.00	.00
GB 7965	088501	.00	.00	6,526.61	6,526.61	.00
GB 7996	088503	.00	.00	6,204.25	6,204.25	.00
GB 8022	088505	.00	.00	10,629.83	10,629.83	.00
GB 8063	088506	.00	.00	8,958.63	8,958.63	.00
GB 8068	088507	.00	.00	5,701.98	5,701.98	.00
GB 8080	088508	.00	.00	9,549.99	9,549.99	.00
GP 8205	088509	.00	.00	13,740.99	13,740.99	.00
GP 8101	088510	.00	.00	5,487.97	5,487.97	.00
GP 8374	088511	.00	.00	7,564.64	7,564.64	.00
GP 8412	088512	.00	.00	7,234.61	7,234.61	.00
GP 8418	088514	.00	.00	15,314.12	15,314.12	.00
GP 8304	088515	.00	.00	11,271.05	11,271.05	.00
GP 8465	088517	.00	.00	7,485.64	7,485.64	.00
GP 8581	088518	.00	.00	9,019.61	9,019.61	.00
GP 8577	088519	.00	.00	2,871.82	2,871.82	.00
GB 8450	088520	.00	.00	8,803.99	8,803.99	.00
GB 8634	088800	.00	3.66	4,722.18	4,725.84	.00
GB 8721	088802	.00	.00	6,903.82	6,903.82	.00
GP 8747	089000	.00	.00	178.78	178.78	.00
GP 8782	089050	.00	.00	3,362.20	3,362.20	.00
GP 8826	089200	.00	.00	337.68	337.68	.00
GP 8929	089290	.00	.00	569.81	569.81	.00
GP 8978	089305	.00	.00	3,339.71	3,339.71	.00
GP 8998	089310	.00	.00	6,372.91	6,372.91	.00
GP 9005	089400	.00	.00	2,341.03	2,341.03	.00
GB 9254	089600	.00	.00	4,632.27	4,632.27	.00
GP 9267	089601	.00	97.83	10,589.87	10,687.70	.00
GP 9287	089602	.00	.00	8,513.91	8,513.91	.00
GP 9409	089610	.00	.00	7,895.87	7,895.87	.00
GP 9469	089615	.00	.00	13,212.73	13,212.73	.00
GA 10102	089800	.00	3,000.00	8,051.09	10,588.25	462.84
GP 10694	089801	.00	201.90	18,844.40	19,046.30	.00
GP 11214	089802	.00	.00	3,096.08	3,096.08	.00
GP 10925	089803	.00	.00	17,146.38	17,146.38	.00
GP 10152	089805	.00	.00	2,728.02	2,728.02	.00
GB 11569	089902	.00	.00	13,092.67	13,092.67	.00
GP 12171	089904	.00	.00	15,361.09	15,361.09	.00
GP 11580	089905	.00	.00	4,007.35	4,007.35	.00
GP 11662	089906	.00	.00	25,150.76	25,150.76	.00
GP 12875	089907	.00	.00	6,852.01	6,852.01	.00
GK 13297	089908	.00	.00	10,372.41	10,372.41	.00
GP 13375	089909	.00	.00	3,318.95	3,318.95	.00
GB 13903	089910	.00	.00	6,290.69	6,290.69	.00
GP 13281	089911	.00	.00	6,549.66	6,549.66	.00
GP 12090	089912	.00	.00	5,557.99	5,671.25	113.26CR

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NSF GP 12533	089913	.00	.00	.00	.00	.00
GB 13806	089924	.00	.00	4,492.58	4,492.58	.00
GP 14440	089925	.00	.00	12,467.35	12,467.35	.00
GB 13842	089926	.00	.00	3,042.85	3,042.85	.00
GP 14110	089927	.00	.00	5,191.93	5,191.93	.00
NSF GP 14130	089928	.00	.00	1,914.25	1,914.25	.00
NSF GP 14606	089930	.00	.00	1,926.92	1,926.92	.00
GP 14690	090000	.00	.00	13,762.11	13,762.11	.00
GP 15260	090010	.00	.00	4,126.84	4,126.84	.00
GP 15282	090020	.00	.00	17,716.35	17,716.35	.00
GP 15857	090023	.00	.00	.00	.00	.00
GP 16024	090030	.00	.00	5,973.08	5,973.08	.00
GP 16033	090050	.00	30.37	11,083.76	11,114.13	.00
GP 16359	090055	.00	.00	2,351.35	2,351.35	.00
NSF GP 16377	090060	.00	.00	2,662.57	2,662.57	.00
GK 16622	090062	.00	.00	9,017.38	9,017.38	.00
GP 17905	090065	.00	.00	35,276.25	35,276.25	.00
GB 18429	090066	.00	.00	3,463.83	3,463.83	.00
GB 18639	090070	.00	.00	11,966.97	11,966.97	.00
NSF GK 18894	090080	.00	.00	1,539.60	1,539.60	.00
NSF GP 19854	091001	.00	.00	.00	.00	.00
NSF GP 20118	091200	.00	.00	3,966.79	3,966.79	.00
NSF GP 20275	091210	.00	.00	1,335.00	1,335.00	.00
NSF GP 20367	091220	.00	.00	.00	.00	.00
NSF GP 20856	091400	.00	.00	.00	.00	.00
NSF GP 20896	091402	.00	.00	.00	.00	.00
NSF GP 21085	091404	.00	.00	831.20	831.20	.00
NSF GP 21185	091406	.00	.00	.00	.00	.00
NSF GP 21284	091408	.00	.00	.00	.00	.00
NSF GP 22515	091499	.00	.00	.00	.00	.00
NSF GP 22530	091500	.00	.00	2,385.03	2,385.03	.00
NSF GP 24496	091600	.00	.00	.00	.00	.00
NSF GP 24498	091601	.00	.00	.00	.00	.00
NSF GK 24514	091605	.00	.00	.00	.00	.00
NATIONAL SCIENCE FOUNDATION	SUB-TOT	12.70	3,549.10	820,659.62	823,871.84	349.58
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AGRICULTURE						
ARS 12-14-100 8870 (44)	062000	.00	12,350.00	5,814.87CR	2,991.32	3,543.81
ARS 12 14 10029 (91)	062001	5,013.30	6,375.00	.00	7,809.08	3,579.22
FOREST SERVICE 009 19135	067302	339.66	.00	.00	339.66	.00
USDA 23 00 019	067600	1,787.29	1,974.42	1,711.18CR	1,102.07	948.46
USDA 23 00 103	067602	218.99	77.71	296.70CR	.00	.00
AGRICULTURE	SUB-TOT	7,359.24	20,777.13	7,822.75CR	12,242.13	8,071.49
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AIR FORCE						
AF 33615 68 C 1053	060701	909.77	6,978.10	2,978.10CR	4,636.88	272.89
AF 19628 68 C 0214	060702	508.98	10,132.76	3,005.79CR	7,542.86	93.09
USAF F 19628 70 C 0199	060703	.00	.00	2,000.00	1,739.73	260.27
AF 19628 2486	062300	577.12	.00	.00	126.90	450.22
AF 19628 4383	062400	.00	.00	.00	.00	.00
AFOSR 68 1440	062501	3,759.20	24,840.00	6,626.00CR	18,739.07	3,234.13
AFOSR 68 1434	062601	5,045.48	24,923.00	6,193.97CR	22,223.96	1,550.55
AFOSR 68 1384	062801	4,390.56	10,005.00	2,293.00CR	9,663.67	2,438.89
AFOSR 218 66	062902	3,269.60	.00	.00	3,269.60	.00
AFOSR 68 1527	063001	12,850.84	7,588.00	2,366.00CR	9,888.41	8,184.43
AFOSR 69 1722	063101	3,711.00	17,452.00	5,150.00CR	12,748.27	3,264.73
AFOSR 777 67	063202	1.38	.00	1.38CR	.00	.00
AFOSR 69 1748	063301	9,849.10	17,072.00	4,391.00CR	16,802.62	5,727.48
AIR FORCE	SUB-TOT	44,873.03	118,990.86	31,005.24CR	107,381.97	25,476.68
ARMY						
DACW 72 67 C 0004	063502	888.44	14,944.65	6,051.44CR	9,475.14	306.51
DAHC 04 68 C 0028	063503	438.11	15,852.13	8,852.13CR	6,954.88	483.23
DAHC 19 69 G 0008	063504	7,254.83	.00	.00	7,173.27	81.56
DAHC 04-70-C-0043	063507	.00	.00	.00	.00	.00
DACW 72-70-C-0029	063508	.00	.00	5,000.00	3,810.00	1,190.00
DAHC 04-70-C-0064	063509	.00	.00	.00	.00	.00
DA 49 193 MD 2634	063600	.00	.00	864.73	864.73	.00
DA 49 193 MD 2989	063602	20.08	96.51	96.51CR	.00	20.08
DA 49 193 MD 3036	063603	686.42	2,508.13	2,283.13CR	906.52	4.90
DA ARO D 31 124 70 G37	063701	.00	9,899.00	2,134.00CR	1,581.05	6,183.95
DA ARO D-31-124-70-G65	063801	.00	6,860.00	1,415.00CR	2,577.60	2,867.40
DA ARO D 31 124 0491	063900	134.94	.00	26.99	.00	161.93
DA 31 124 ARO D 412	064000	.00	134.57	134.57CR	.00	.00
DA ARO D 31 124 G 859	064003	15,563.72	.00	.00	15,151.87	411.85
ARMY	SUB-TOT	24,986.54	50,294.99	15,075.06CR	48,495.06	11,711.41
AEC						
AEC D NET 11 67	064202	219.10	.00	.00	.00	219.10
AEC AT 30 1 3561	065000	4,821.62	.00	.00	2,656.40	2,165.22
AEC AT 30 1 3626	065002	1,323.61	19,421.00	5,539.50CR	15,509.10	303.99CR
AEC AT 30 1 3651	065003	24,417.16	139,500.00	38,373.14CR	117,300.77	8,243.25

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
AEC AT 30 1 3812	065004	.00	.00	.00	.00	.00
AEC AT 30 1 3651 B	065005	2,362.06	13,500.00	2,213.75CR	6,828.23	6,820.08
AEC AT 30 1 4096	065006	12,628.00	16,255.79	2,808.97CR	17,805.74	8,269.08
AEC	SUB-TOT	45,771.55	188,676.79	48,935.36CR	160,100.24	25,412.74
NASA						
NAS 12 606 A	066003	850.05	9,723.79	5,967.98CR	4,162.48	443.38
NAS 12 606 B	066004	923.64	12,778.05	7,269.81CR	6,875.26	443.38CR
NAS 12 2175	066005	.00	24,233.09	6,351.38CR	17,881.71	.00
NGR 22 010 018	066203	.00	13,000.00	5,431.67CR	9,676.30	2,107.97CR
NGR 22 010 023	066204	.00	32,000.00	9,671.19CR	26,025.25	3,696.44CR
NGR 22 010 019	066205	.00	5,500.00	1,272.42CR	3,621.83	605.75
NGR 22 010 012	066206	.00	1,558.00	1,522.45CR	35.47	.08
NGR 22 010 025	066207	.00	125,012.00	36,541.14CR	103,099.65	14,628.79CR
NGR 22 010 029	066208	2,089.62	35,440.00	5,661.35CR	29,155.67	2,712.60
NGR 22 010 039	066209	4,649.99	70,000.00	21,660.83CR	54,291.32	1,302.16CR
NGR 22 010 042	066210	.00	11,097.00	6,225.84CR	4,798.85	72.31
NGR 22 010 041	066211	.00	5,565.00	1,732.75CR	3,827.59	4.66
NGR 22-010-054	066212	.00	500.00	.00	2,543.05	2,043.05CR
NGR-22-010-063	066213	.00	3,750.00	.00	78.18	3,671.82
NASA- NGR 22-010-052	066214	.00	.00	.00	300.00	300.00CR
NASA NGL 22-010-076	066215	.00	.00	.00	1,135.00	1,135.00CR
NASA	SUB-TOT	8,513.30	350,156.93	109,308.81CR	267,507.61	18,146.19CR
DEPARTMENT OF INTERIOR						
WR B003	060501	7,436.52	17,867.00	.00	17,949.79	7,353.73
WR B004	060502	8,362.77	26,230.00	.00	25,904.86	8,687.91
WR B005	060503	8,673.61	12,300.00	1,804.64	9,795.92	12,982.33
WR B006	060504	.00	11,834.00	1,060.87CR	10,283.59	489.54
WR B008	060505	4,410.71	13,000.00	.00	16,627.50	783.21
WR B010	060506	14,225.64	31,625.00	.00	37,214.93	8,635.71
WR B011	060507	5,193.71	44,190.00	1,804.64CR	42,562.41	5,016.66
WR B012	060508	.00	30,900.00	.00	20,217.39	10,682.61
WR B014	060509	.00	17,550.00	.00	.00	17,550.00
WR B015	060510	.00	13,620.00	.00	12,211.43	1,408.57
DI 14-31-0001-3290	060511	.00	.00	.00	.00	.00
DI 14-31-0001-3291	060512	.00	.00	.00	.00	.00
WP 14 12 7	065200	.00	275.00	514.00CR	.00	239.00CR
DI 14 01 0001 1251	065202	4,400.74	.00	.00	4,400.74	.00
DI FWPCA 16030 DVB	065204	.00	8,015.71	2,971.12	10,999.91	13.08CR
DI 05W 14 01 0001 2297	065205	.00	29,520.00	3,018.41CR	12,569.31	13,932.28

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
DI 16030 DVB-2	065207	.00	.00	2,000.00	1,903.17	96.83
DI 14 16 005 3124	065303	.00	4,056.70	1,088.00CR	3,275.90	307.20CR
BSFW 14-16-0005-3174 (FS)	065304	.00	.00	420.00	1,052.00	632.00CR
DI 14 17 0004 315	065503	.00	241.46	241.46CR	.00	.00
DI FWPCA 18050 DBT	065821	926.33	2,471.94	1,528.06	4,502.54	423.79
DI FWPCA 17070 DZS	065831	.00	29,225.53	1,399.14CR	27,541.78	284.61
DI FWPCA 17050 EHG	065841	.00	13,695.89	10,035.11	22,799.64	931.36
WP 01239 02	074602	926.68	.00	253.88	2,705.83	1,525.27CR
WP 01408 01	074701	1,652.72	.00	44.26	1,435.66	261.32
DEPARTMENT OF INTERIOR	SUB-TOT	56,209.43	306,618.23	9,930.55	285,954.30	86,803.91
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NONR						
N 600 167 65486 XF8M	066202	17.29	200.75	211.05CR	6.99	.00
NONR 3357 01	066300	590.85	21,867.98	10,617.98CR	11,643.45	197.40
NONR 3357 02	066500	27.30	8,164.33	5,006.65CR	3,475.22	290.24CR
N 00014 67 A 230 0001	066600	1,028.02	75,438.60	10,841.51	79,728.80	7,579.33
N 00014 67 A 0230 0002	066801	540.71	44,856.68	12,873.68CR	32,295.34	228.37
N 00014 67 A 0230 0003	066802	869.81	17,986.70	4,986.70CR	13,799.18	70.63
N 00014 67 A 0230 0004	066803	645.00	8,780.52	780.52CR	7,856.06	788.94
N0014-67A 0230-0005	066804	.00	.00	4,000.00	3,581.83	418.17
NONR 3357 07	067000	400.21	203.50	513.31CR	90.40	.00
NONR 3357 05	067100	.00	744.14	744.14CR	.00	.00
NONR 3357 08	067202	522.66	15,018.23	3,150.07	18,215.40	475.56
THEMIS N00014 68 A 0146 1	067401	1,964.31	153,908.29	23,013.34CR	88,967.76	43,891.50
THEMIS N00014 68 A 0146 2	067402	.00	.00	.00	789.40	789.40CR
THEMIS N00014 68 A 0146 3	067403	.00	.00	.00	2,638.42	2,638.42CR
THEMIS N00014 68 A 0146 4	067404	.00	.00	.00	3,276.38	3,276.38CR
THEMIS N00014 68 A 0146 5	067405	.00	.00	.00	.00	.00
THEMIS N00014 68 A 0146 6	067406	.00	.00	.00	13,428.17	13,428.17CR
THEMIS N00014 68 A 0146 7	067407	.00	.00	.00	4,484.52	4,484.52CR
THEMIS N00014 68 A 0146 8	067408	.00	.00	.00	.00	.00
THEMIS N00014 68 A 0146 9	067409	.00	.00	.00	4,561.08	4,561.08CR
THEMIS N00014 68 A 0146 10	067410	.00	.00	.00	3,075.04	3,075.04CR
THEMIS N00014 68 A 0146 11	067411	.00	.00	.00	.00	.00
THEMIS N00014 68 A 0146 12	067412	.00	.00	.00	2,697.99	2,697.99CR
THEMIS N00014 68 A 0146 13	067413	.00	.00	.00	3,155.93	3,155.93CR
THEMIS N00014 68 A 0146 14	067414	.00	.00	.00	.00	.00
THEMIS N00014 68 A 0146 1A	067415	.00	.00	.00	1,816.92	1,816.92CR
THEMIS N00014 68 A 0146 16	067416	.00	47.05	.00	1,670.12	1,623.07CR
NONR	SUB-TOT	6,606.16	347,216.77	40,755.79CR	301,254.40	11,812.74
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
EDUCATION						
OEG 1 6 000496 0662	068202	11,061.71	13,417.00	3,438.36CR	31,827.50	10,787.15CR
OEG 0 8 003093 031 B	068210	11,104.54	.00	.00	2,160.29	8,944.25
OEG 0 9 311104 3112 031 B	068212	.00	17,010.00	4,630.00CR	8,678.76	3,701.24
OEG 1-70-0010	068218	.00	6,505.00	695.00CR	1,443.66	4,366.34
OEG 1-70-00039-0019 (509)	068220	.00	.00	.00	240.00	240.00CR
OEG 1-70-00014-0020 (509)	068221	.00	.00	.00	.00	.00
OEG 1-70-00052-0021	068222	.00	.00	.00	.00	.00
OEG 1 8 08A 028 0032 058	068303	.00	.00	154.95CR	2,072.43	2,227.38CR
OEG 1 9 090003 0102 010	068304	3,749.25	414.96	.00	4,211.70	47.49CR
OEG 1 9 090022 0109 010	068305	2,589.11	.00	.00	2,153.78	435.33
OEG 0 9 313519 3519 097	068306	9,458.16	217,583.18	7,045.94CR	177,872.89	42,122.51
OEC 0 9 310417 4040	068307	915.50	141,629.68	53,629.68CR	85,636.28	3,279.22
OE 6 10 014	068602	.00	5,168.00	5,157.00CR	11.00	.00
OE 6 10 349	068800	.00	.00	.00	.00	.00
OEG 1 7 000211 0211	069200	1,052.95	142,525.01	12,580.32CR	131,031.93	34.29CR
EDUCATION	SUB-TOT	39,931.22	544,252.83	87,331.25CR	447,340.22	49,512.58
U.S. DEPT OF LABOR						
USDI 91 23 66 55	061800	.00	.00	1,001.71CR	.00	1,001.71CR
USDI 91 23 68 27	061801	2,037.92	.00	.00	1,441.85	596.07
USDI 91 23 68 931	061802	267.99	.00	.00	70.54	197.45
USDI 91 23 69 20	061803	7,138.50	.00	.00	3,948.61	3,189.89
U.S. DEPT OF LABOR	SUB-TOT	9,444.41	.00	1,001.71CR	5,461.00	2,981.70
OTHER						
MASS BUREAU OF VOCATIONAL ED 0662	060201	1,819.96	15,130.00	28.97CR	15,529.47	1,391.52
NFAH H 69 0 41	061702	169.76	2,000.00	1,262.25CR	907.51	.00
A-69-0-212	061703	.00	1,000.00	1,000.00CR	.00	.00
NATIONAL ENDOWMENT FOR THE HUMANITIES	061704	.00	.00	.00	3,209.75	3,209.75CR
DC E 174 69N	064301	620.87	34,708.00	1,141.00CR	33,229.64	958.23
COMMUNITY SERVICE UI 11 67	065102	236.89	2,757.40	.00	2,994.29	.00
COMMUNITY SERVICE 68 025 001	065103	451.40	.00	.00	2,332.58	1,881.18CR
COMMUNITY SERVICE 68 024 005	065104	.00	3,546.00	3,372.00CR	174.00	.00
TITLE 1-70-025-012	065105	.00	8,784.00	444.00CR	.00	8,340.00
TITLE 1-70-025-011	065106	.00	3,600.00	.00	797.98	2,802.02
OTHER	SUB-TOT	3,298.88	71,525.40	7,248.22CR	59,175.22	8,400.84

Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	247,511.90	2,090,089.23	1,312,561.32	3,435,144.32	215,018.13
**********						
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	06-20	3,860,353.38	37,019,421.62	456,896.06CR	35,564,245.22	4,858,633.72
**********						
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
STATE EMPLOYEES INSURANCE PREMIUM	039100	82,737.80	96,861.91	9,083.35	117,523.31	71,160.35
TAX SHELTER ANNUITIES	039900	80,767.73	438,923.38	6,922.04	447,534.51	79,078.64
BIERHOST AGENCY	094200	341.76	.00	.00	159.45	182.31
CARNEGIE INTERNSHIP PROGRAM	094300	1,072.92	.00	.00	704.62	368.30
CCEBS AGENCY	094350	5,594.35	279,037.52	613.17CR	310,009.66	25,990.96CR
DISADVANTAGED STUDENTS FUND	094401	.00	.00	.00	.00	.00
EDUCATIONAL FACILITIES LABORATORY	094435	39.18	.00	39.18CR	.00	.00
EDUCATION FILM AND TAPE	094450	1,606.32	2,080.50	.00	2,585.80	1,101.02
EQUIPMENT SHORTAGE AF ROTC	094500	194.68	.00	.00	.00	194.68
EQUIPMENT SHORTAGE AR ROTC	094700	1,432.10	73.45	15.00CR	193.89	1,296.66
EDUCATIONAL TESTING SERVICE	094800	136.60	679.81	.00	590.64	225.77
FEDERAL TAX ON PERSONAL TELEPHONE CALLS	094900	2.92	316.61	.00	208.17	111.36
4 H ACTIVITIES	095100	517.49	2,682.67	.00	1,459.80	1,740.36
HEALTH PHYSICAL EDUCATION & RECREATION	095200	7.37	.00	7.37CR	.00	.00
HOME ECONOMICS SCHOLARSHIP	095300	1.59	.00	1.59CR	.00	.00
HONORS BANQUET FUND	095400	.00	1,244.00	.00	939.13	304.87
MASSACHUSETTS EDUCATIONAL FILM FUND	095700	663.98	5,374.80	1,152.55CR	33.30	4,852.93
MASSACHUSETTS REVIEW	095900	11,610.33	23,760.59	11,411.05	38,771.59	8,010.38
MILDRED PIERPONT MEMORIAL FUND	096100	185.00	.00	.00	.00	185.00
NATIONAL COUNCIL OF COLLEGE PUBLICATION	096300	2,136.40	451.96	.00	342.20	2,246.16
WILDLIFE SERVICE FUND	096500	6,906.14	46,448.50	.00	49,583.14	3,771.50
SPECIAL MILITARY FUND	096700	62.57	90.00	.00	85.07	67.50
STUDENT DEPOSIT ACCOUNT	096900	64,322.58	1,990,602.01	.00	1,935,942.03	118,982.56
STUDENT HEALTH AND ACCIDENT INSURANCE	097100	428.45	69,268.00	.00	63,116.50	6,579.95
PRUDENTIAL INSURANCE ACCOUNT BOSTON	097200	14,185.85	337,978.15	.00	349,282.00	2,882.00
UNITED STATES SAVINGS BONDS / NOTES	097300	5,583.70	116,264.10	6,922.04CR	110,814.88	4,110.88
WESTERN MASS BROADCASTING COUNCIL	097500	.00	42,418.44	.00	46,325.15	3,906.71CR
AGENCY FUNDS	SECT 21	280,537.81	3,454,556.40	18,666.14	3,476,204.84	277,555.51
**********						
GRAND TOTAL OF TRUST AND AGENCY FUNDS		4,327,265.11	40,849,337.57	103,194.87CR	39,702,687.99	5,370,719.82
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Schedule F-1 (Continued)

TRUST FUNDS AMHERST CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
SUMMARY REPORT OF ALL SECTION						
FEDERAL FELLOWSHIP	SECT 03	33,786.29	39,995.78	286,416.51	328,760.62	31,437.96
MISCELLANEOUS FELLOWSHIPS	SECT 04	49,119.55	101,552.42	4,227.05CR	69,759.43	76,685.49
SCHOLARSHIPS	SECT 05	103,468.08	233,811.35	52,845.59	263,717.88	126,407.14
AUXILIARY ENTERPRISES	SECT 06	1,707,045.35	7,328,493.09	5,438,001.70	12,346,092.82	2,127,447.32
CLEARING ACCOUNT	SECT 07	13,601.33	21,492,211.06	10,741,867.07CR	10,870,026.32	106,081.00CR
GENERAL PURPOSE FUND	SECT 08	685,873.84	1,251,671.75	717,733.37	1,399,642.81	1,255,636.15
GIFTS & GRANTS PENDING TRUSTEE ACTION	SECT 09	3,187.02	1,767.57	100.00CR	404.57	4,450.02
LIBRARY FUNDS	SECT 10	6,642.56	6,681.38	125,125.78	128,666.18	9,783.54
MISCELLANEOUS SERVICE FUNDS	SECT 11	252,384.09	448,641.60	1,108,388.27	1,460,261.53	349,152.43
STUDENT PROGRAMS	SECT 12	326,527.46	1,581,521.78	758,714.73	2,231,403.39	435,360.58
SPONSORED RESEARCH	SECT 13	166,943.49	170,223.76	5,331.75CR	143,799.78	188,035.72
U OF M SPONSORED RESEARCH	SECT 14	42,613.14	308.92	80,736.69	84,319.71	39,339.04
NONPROFIT ORGANIZATIONS & FOUNDATIONS	SECT 15	165,854.80	639,108.79	8,434.91CR	562,857.57	233,671.11
FEDERAL GRANTS AND CONTRACTS TRAINING	SECT 16	92,910.39	569,612.53	434,878.44	1,081,194.36	16,207.00
FEDERAL GRANTS AND CONTRACTS-FACILITIES	SECT 17	15,576.00	.00	.00	.00	15,576.00
FEDERAL GRANTS AND CONTRACTS EQUIPMENT	SECT 18	3,999.04	77,269.30	32,982.55	122,949.44	8,698.55CR
FEDERAL GRANTS CONTRACTS OTHER PURPOSES	SECT 19	129,682.97	1,361,820.86	289,714.82	1,697,482.42	83,736.23
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	247,511.90	2,090,089.23	1,312,561.32	3,435,144.32	215,018.13
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	03-20	4,046,727.30	37,394,781.17	121,861.01CR	36,226,483.15	5,093,164.31
**********						
**********						
AGENCY FUNDS	SECT 21	280,537.81	3,454,556.40	18,666.14	3,476,204.84	277,555.51
GRAND TOTAL OF TRUST AND AGENCY FUNDS		4,327,265.11	40,849,337.57	103,194.87CR	39,702,687.99	5,370,719.82
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Schedule F-2

Athletic Trust Fund

Statement of Receipts, Disbursements and Balances

Balance, July 1, 1969			$ 25,231.80
Receipts:			
Student Fees	$525,085.50		
Other Receipts	30,678.03		
		$555,763.53	
Less:			
Refund of Student Fees	$ 7,371.50		
Transfer to U.M. Bldg. Authority Project #4	80,000.00		
Transfer to Barber Scholarship Fund	5,000.00		
		$ 92,371.50	
Net Receipts			$463,392.03
Total Available			$488,623.83
Disbursements:			
Intercollegiate Athletics		$173,970.42	
Intramural and Other Programs		53,541.22	
Athletic Injury Care		17,511.86	
Publicity		5,667.20	
Band & Cheerleaders		5,677.76	
Travel		18,194.11	
Operating Expenses		161,538.08	
Contingencies		7,150.00	
Capital Outlay		12,907.72	
Other Expenses		20,451.06	
Total Disbursements			$476,609.43
Balance, June 30, 1970			$ 12,014.40

Athletic Reserve Account

Balance, July 1, 1969		$ 33,307.48
Interest on Savings Account		89.85
Balance, June 30, 1970		$ 33,397.33

Athletic Reserve - Special

Balance, July 1, 1969		$242,837.15
Interest on Savings Account	$ 17,249.86	
Transfers In	50,000.00	
		67,249.86
Funds Available		$310,087.01
Transfers Out		53,000.00
Balance, June 30, 1970		$257,087.01

George H. Barber Scholarship Fund

Balance, July 1, 1969		$ 26,000.00
Income from Ticket Sales, Donations and Miscellaneous Sources		153,478.00
Funds Available		$179,478.09
Disbursements:		
Scholarships	$178,018.50	
Less: Refunds	4,666.00	
		$173,352.50
Balance, June 30, 1970		$ 6,125.59

Schedule F-3

Boarding Halls

Statement of Receipts, Disbursements and Balances

Balance, July 1, 1969		$ 132,401.94	
Receipts:			
Income	$5,858,915.29		
Less: Student Refunds	182,282.40		
Transfer to U. of M. Building Authority Projects Three, Five, Seven and Nine	614,240.50		
Net Receipts		$5,062,392.39	
			$5,194,794.33
Disbursements:			
Salaries and Wages	$2,662,460.94		
Food Purchases	1,959,300.01		
Clothing	374.90		
Housekeeping Supplies	109,265.35		
Heat and Other Plant Operations	12,474.42		
Travel	540.04		
Advertising & Printing	2,864.39		
Repairs	42,529.47		
Office & Administration	15,366.87		
Equipment	19,229.89		
Rental	257,458.02		
Capital Outlay	39,229.31		
Total Disbursements			$5,121,093.61
Balance, June 30, 1970			$ 73,700.72

Recognized Student Organizations

Statement of Receipts, Disbursements and Balances
Year Ended June 30, 1970

Balance July 1, 1969			
Amherst Savings Bank		$ 85,466.59	
First National Bank of Amherst		63,267.69	
Total			$ 148,734.28
Receipts:			
Amherst Student Fees		$ 499,582.12	
Cash Receipts	$ 537,290.21		
Add In-transit Items (6/30/69	420.51		
Less In-transit Items 6/30/70	(1,656.30)		
		536,054.42	
			1,035,636.54
Interactivity Receipts			$1,511,735.62
Total			$2,696,106.44
Disbursements:			
Cash		$ 993,256.12	
Add In-transit Items 6/30/69		6,681.85	
Less In-transit Items 6/30/70		(12,199.45)	
			$ 987,738.52
Interactivity Disbursements			1,511,735.62
			$2,499,474.14
Balance June 30, 1970			
Amherst Savings Bank		$ 90,209.40	
First National Bank of Amherst		106,422.90	
			$ 196,632.30
Total			$2,696,106.44

Student Health Service

Statement of Receipts, Disbursements, and Balances

Balance, July 1, 1969		$ 67,363.64	
Receipts:			
Student Fees	$1,091,571.21		
Other Receipts	2,500.00		
Less: Student Refunds	16,504.40		
Net Receipts		$1,077,566.81	
			$1,144,930.45
Disbursements:			
Salaries and Wages		$ 979,902.75	
Food		10,412.57	
Clothing		65.25	
Housekeeping Supplies		16,438.75	
Laboratory and Medical Supplies		76,713.22	
Travel		7,402.15	
Printing and Advertising		6,959.14	
Repairs and Replacements		1,955.97	
Office and Administration Expenses		25,930.56	
Equipment		12,894.13	
Rental		6,237.81	
Other		2.76	
Total Disbursements			$1,144,915.06
Balance, June 30, 1970			$ 15.39

STUDENT UNION
UNIVERSITY STORE - AMHERST
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1970

Sales		
Books	$1,309,135.57	
Supplies	594,179.46	
Lobby	143,838.64	$2,047,153.67
Cost of Goods Sold		
Beginning Inventory	558,749.99	
Purchases	2,071,937.68	
Freight In	27,446.13	
	2,658,133.80	
Less: Purchase Ret. & Allow.	381,660.31	
	2,276,473.49	
Less: Purchase Discounts	5,955.06	
	2,270,518.43	
Less: Ending Inventory	685,084.36	$1,585,434.07
Gross Profit On Sales		$ 461,719.60
Operating Expenses		
Payroll - Regular	159,460.09	
Payroll - Student	15,810.40	
Payroll - Hourly	60,413.23	
Employees' Group Insurance	3,050.36	
Insurance	5,258.66	
Office Supplies	3,089.81	
Store Supplies	15,277.79	
Telephone & Telegraph	1,957.30	
Postage	2,739.13	
Advertising	700.50	
Travel and Education	693.83	
Doubtful Accounts	45.24	
Repairs and Maintenance	1,973.60	
Lobby Counter Expenses	21,093.97	
Cash Shortages	850.47	
Miscellaneous	1,282.50	$ 293,696.88
Net Income (Loss) from Operations		$ 168,022.72
Other Income		
Laboratory Fees	14,351.48	
Post Office	5,499.96	
Cash Overages - Lobby Counter	22.32	
Miscellaneous	1,508.68	$ 21,382.44
Other Expenses		
Transfer to General Fund	100,000.00	$ 100,000.00
Net Income (Loss) for Period		$ 89,405.16

Schedule F-7

STUDENT UNION
UNIVERSITY STORE - AMHERST
BALANCE SHEET
AS OF JUNE 30, 1970

ASSETS

Current Assets:		
Cash in Bank		$ 93,498.69
Cash in Transit		4,331.56
Cash on Hand		5,000.00
Accounts Receivable		50,150.71
Accounts Receivable - Book Vendors		269,835.47
Accounts Receivable - Supply Vendors		4,887.50
Inventory - Books		508,906.00
Inventory - Supplies		172,655.00
Inventory - Lobby Counter		3,523.36
Prepaid Expenses		555.81
Total Current Assets		$1,113,344.10
Fixed Assets:		
Office Furniture and Fixtures	$ 17,084.56	
Less: Accumulated Depreciation	7,528.00	9,556.56
Machinery and Equipment	24,116.40	
Less: Accumulated Depreciation	8,473.24	15,643.16
Automobiles and Trucks	1,974.00	
Less: Accumulated Depreciation	-0-	1,974.00
Investment in Boston Campus Store		107,590.96
Total Assets		$1,248,108.78

LIABILITIES AND CAPITAL

Current Liabilities:	
Accounts Payable	$ 295,369.56
Accrued Payroll	1,665.76
Accrued Taxes - Mass. Sales Tax	296.88
Laboratory Fees	66,318.03
Total Current Liabilities	$ 363,650.23
Capital:	
Retained Earnings	$ 884,458.55
Total Liabilities and Capital	$1,248,108.78

RETAINED EARNINGS

Balance July 1, 1969	$795,053.39
Net Income (Loss) for Year	89,405.16
Balance June 30, 1970	$884,458.55

STUDENT UNION FOOD SERVICE
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1970

SALES:		
Hatch	$565,628.96	
Commonwealth	44,206.36	
Catering	60,856.22	$670,691.54
COST OF GOODS SOLD:		
Inventory July 1, 1969	9,188.70	
Food Purchases	298,408.12	
Freight In	11.83	
	307,608.65	
Less: Cash Discounts	304.04	
Total Available for Sale	307,304.61	
Less: Inventory, June 30, 1970	8,605.21	$298,699.40
GROSS PROFIT ON SALES		$371,992.14
OPERATING EXPENSES:		
Payroll - Regular	282,153.14	
Payroll - Student	30,071.87	
Employees' Group Insurance	6,826.87	
Office Supplies	1,178.32	
Restaurant Supplies	29,634.93	
Telephone & Telegraph	784.76	
Postage	98.64	
Advertising	155.20	
Travel & Education	263.02	
Uniforms	128.38	
Linen	231.50	
Laundry	6,138.53	
China & Silver	1,206.65	
Repairs & Maintenance	3,303.93	
Heat & Utilities	223.30	
Cash Shortage	360.63	
Miscellaneous	6.50	$362,766.17
NET OPERATING INCOME		$ 9,225.97
OTHER REVENUE:		
Vending	2,537.60	
Juke Box	1,258.30	
Cash Overages	370.24	
Miscellaneous	2,790.64	$ 6,956.78
NET INCOME FOR YEAR		$ 16,182.75

STUDENT UNION FOOD SERVICE
BALANCE SHEET
AS OF JUNE 30, 1970

ASSETS

Current Assets:		
Cash in Bank		$ 20,179.81
Cash in Transit		3,280.30
Cash on Hand		1,600.00
Petty Cash		50.00
Accounts Receivables		26,373.68
Inventory - Food		8,605.21
Total Current Assets		$ 60,089.00
Fixed Assets:		
Office Furniture & Fixtures	$ 2,921.73	
Less: Accumulated Depreciation	1,227.01	
	1,694.72	
Machinery & Equipment	$56,832.20	
Less: Accumulated Depreciation	17,934.89	40,592.03
Total Assets		$100,681.03

LIABILITIES AND CAPITAL

Current Liabilities:	
Accounts Payable	$ 20,234.18
Accrued Payroll	1,820.04
Accrued Taxes - Mass. Old Age Tax	583.71
Total Current Liabilities	$ 22,637.93
Capital:	
Retained Earnings	$ 78,043.10
Total Liabilities and Capital	$100,681.03

RETAINED EARNINGS

Balance July 1, 1969	$ 61,860.35
Net Income for the Year	16,182.75
Balance June 30, 1970	$ 78,043.10

Schedule F-10

STUDENT UNION
GENERAL FUND
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1970

INCOME		
Transfer from Amortization Fund		$ 83,870.00
Transfer from Reserve Fund		77,161.65
Transfer from University Store		100,000.00
Transfer from Food Service		-0-
Check Cashing Service Fees		9,333.30
Custodial		2,417.90
Conference Services		221,178.58
Continuing Education		37,701.54
Ticket Office		114,390.98
Games Area		10,920.64
Duplicating and Printing		5,385.44
Scheduling Office		6,507.08
Technical Services		5,614.66
Accommodation Services		15,066.20
Miscellaneous		5,845.73
Total Income		$695,393.70
EXPENSES		
Administrative	$186,443.42	
Maintenance	156,526.91	
Conference Service	227,961.30	
Continuing Education	1,302.45	
Ticket Office	111,467.89	
Games Area	11,732.68	
Duplicating and Printing	1,847.90	
Scheduling Office	15,546.40	
Technical Services	9,180.36	
Accommodation Services	12,196.21	
Total Expenses		734,205.52
NET INCOME (LOSS) FOR THE YEAR		($ 38,811.82)

Schedule F-11

STUDENT UNION
GENERAL FUND
BALANCE SHEET
AS OF JUNE 30, 1970

ASSETS

Current Assets:		
Cash in Bank		($ 33,672.92)
Cash in Transit		14,738.45
Cash on Hand		15,050.00
Accounts Receivable		22,257.76
Prepaid Expenses		-0-
Total Current Assets		$ 18,373.29
Fixed Assets:		
Office Furniture and Fixtures	$ 45,966.96	
Less: Accumulated Depreciation	14,397.39	31,569.57
Machinery and Equipment	$ 54,038.44	
Less: Accumulated Depreciation	14,204.49	39,833.95
Total Assets		$ 89,776.81

Liabilities and Capital

Current Liabilities:	
Accounts Payable	$ 73,828.07
Accrued Payroll	4,731.78
Key Deposits	135.75
Total Current Liabilities	$ 78,695.60
Capital:	
Retained Earnings	$ 11,081.21
Total Liabilities and Capital	89,776.81

RETAINED EARNINGS

Balance July 1, 1969	$ 49,893.03
Net Income (Loss) for the year	(38,811.82)
Balance June 30, 1970	$ 11,081.21

Student Union Reserve Fund

Balance July 1, 1969	$ 77,161.65
Transferred to Student Union General	77,161.65
Balance June 30, 1970	$ -0-

Student Union Building Amortization Fund

Balance July 1, 1969		$619,209.72
Fees	$339,184.96	
Less: Refunds	8,784.90	
		330,400.06
Funds Available		$949,609.78
Expenses:		
Reimbursement to Commonwealth		125,000.00
Balance June 30, 1970		$824,609.78

Schedule G-1

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1970
Amherst	751.1	$2,723,160.00
Hadley	446.4	284,380.00
Amherst	46.0	500.00
Pelham	.5	100.00
Pelham	1,196.0	20,000.00
Belchertown	218.0	17,210.00
Belchertown	4.0	100.00
Sunderland	726.2	17,600.00
Leverett	28.8	270.00
East Wareham	28.6	12,750.00
Waltham	58.8	92,450.00
South Deerfield	358.1	21,020.00
Nantucket Island	107.0	13,000.00
Total	3,969.5	$3,202,540.00

Schedule G-2

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
5	1940	Amherst	Butterfield Hall (Dormitory)	$ 232,598.00
6	1947	Amherst	Chadbourne House (Dormitory)	260,000.00
7	1948	Amherst	Berkshire House (Administration)	165,266.00
8	1948	Amherst	Hampshire House (Administration)	165,266.00
9	1948	Amherst	Middlesex House (Administration)	163,800.00
24	1946	Amherst	Greenough House (Dormitory)	260,000.00
28	1940	Amherst	Lewis House (Dormitory)	177,019.00
29	1948	Amherst	Mills House (Dormitory)	375,000.00
30	1935	Amherst	Thatcher House (Dormitory)	193,950.00
38	1869	Amherst	Blaisdell House	4,000.00
48	1947	Amherst	Brooder House	100.00
49	1947	Amherst	Brooder House	100.00
50	1947	Amherst	Brooder House	100.00
51	1947	Amherst	Brooder House	100.00
52	1914	Amherst	Milker's Bungalow House	2,100.00
53	1910	Amherst	Harlow House	2,550.00
54	1922	Amherst	Hilton House	9,400.00
55	1922	Amherst	Hilton Garage	300.00
57	1884	Amherst	President's House	19,000.00
58	1955	Amherst	Montague House	8,000.00
59	1939	Amherst	Tillson Garage	384.00
60	1926	Amherst	Tillson House	6,714.00
61	1867	Amherst	Homestead House	14,800.00
62	1867	Amherst	Stockbridge House	9,100.00
63	1911	Amherst	Waiting Station (Shelter)	500.00
64	1930	Amherst	Scale House	250.00
65	1961	Amherst	Kiln	2,500.00
66	1918	Sunderland	Shed	1,500.00
67	1918	Sunderland	House	3,000.00
68	1961	Pelham	Radio Station	1,500.00
70	1929	Amherst	Garage	2,500.00
71	1918	Amherst	Grounds Tool Shed & Garage	245.00
72	1953	Amherst	Animal Isolation Laboratory	98,500.00
73	1957	Amherst	Thayer Laboratory	50,000.00
74	1911	Amherst	Apiary Laboratory	3,000.00
76	1959	Amherst	Power Supply Facility	3,432,764.00
77	1937	Amherst	Bowditch Lodge	50,000.00
79	1950	Amherst	Police Station Garage	63,800.00
80	1885	Amherst	Chapel - Classrooms	76,288.00
82	1959	Amherst	Goessmann Laboratory & Classrooms	2,896,900.00
83	1907	Amherst	Clark Hall Laboratory & Classrooms	67,400.00
84	1907		Greenhouse	
85	1953	Amherst	Worcester Dining Commons	985,300.00

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
86	1961	Amherst	Worcester Dining Commons (Addition)	$ 504,475.00
87	1903	Amherst	Draper Hall Classrooms	296,529.00
88	1947		Draper Hall - Annex (Storage)	
89	1889	Amherst	East Experiment Station Laboratory	14,000.00
90	1949	Amherst	Shade Tree Laboratory	23,400.00
91	1949	Amherst	Gunness Laboratory	374,500.00
92	1950	Amherst	Engineering Classrooms	1,120,753.00
93	1949	Amherst	Engineering Annex - Classrooms	118,500.00
94	1915	Amherst	Engineering Shops - Labs. & Classrooms	28,550.00
95	1933	Amherst	Farley 4-H Lodge	50,000.00
96	1955	Amherst	Durfee Greenhouses	69,684.00
97	1910	Amherst	Fernald Hall - Laboratory	80,000.00
98	1910	Amherst	Fernald Hall Greenhouse	825.00
99	1911	Amherst	Fisher Cold Storage	24,616.00
100	1912	Amherst	Flint Laboratory	210,723.00
101	1930	Amherst	Chenoweth Laboratory	69,966.00
103	1867	Amherst	Forestry - Classrooms and Laboratory	2,590.00
104	1909	Amherst	French Hall - Classrooms and Labs.	74,356.00
105	1908	Amherst	French Hall Greenhouse	25,500.00
106	1915	Amherst	Hospitals	34,300.00
107	1960	Amherst	Bartlett - Classrooms and Lab.	2,181,125.00
109	1931	Amherst	Storage - Lumber	2,150.00
110	1923	Amherst	Tillson Storage	1,574.00
111	1957	Amherst	Machmer Hall - Classrooms	967,578.00
112	1947	Amherst	Marshall Annex - Classrooms	68,459.00
113	1915		Marshall Hall - Classrooms and Labs.	
115	1920	Amherst	Memorial Hall - Classrooms	107,425.00
116	1898	Amherst	Munson Hall - Administration	70,127.00
117	1899		Munson Annex - Administration	
118	1891	Amherst	Hatch - Classrooms and Labs.	19,374.00
120	1950	Amherst	Paige Laboratory	487,500.00
121	1931	Amherst	Hicks - Physical Education (Men)	287,500.00
122	1931		Hicks - Physical Education (Men)	
123	1959	Amherst	Physical Education (Women)	1,716,581.00
124	1950	Amherst	Hasbrouck - Classrooms & Labs.	501,000.00
125	1907	Amherst	Photography Laboratory	12,000.00
126	1959	Amherst	Public Health - Classrooms & Labs	1,360,800.00
127	1960	Amherst	Morrill Science I - Classrooms & Labs.	1,941,020.00
128	1948	Amherst	Skinner Hall - Classrooms & Labs.	596,700.00
129	1885	Amherst	South College Administration	100,300.00
130	1912	Amherst	Stockbridge - Classrooms & Labs.	417,066.00
132	1960	Amherst	Dickinson Hall - Classrooms & Labs.	468,105.00
133	1918	Amherst	Power Supply Facility	17,665.00
134	1952	Amherst	Power Supply Facility	263,615.00
135	1959	Amherst	Bowditch - Classrooms & Labs.	293,500.00
136	1911	Amherst	Grinnell Arena	38,000.00
137	1929		Abattoir Slaughter House	
139	1950		Storage - Maintenance	
141	1931	Amherst	Ticket Booth Athletic	500.00
145	1956	Amherst	Poultry House	800.00
146	1955	Amherst	Poultry House	600.00
147	1956	Amherst	Poultry House	800.00
148	1947	Amherst	Brooder House	100.00
151	1923	Amherst	Poultry House	500.00
152	1923	Amherst	Poultry House	500.00
153	1957	Amherst	Brooder House	100.00
154	1957	Amherst	Brooder House	100.00
155	1957	Amherst	Brooder House	100.00
157	1939	Amherst	Storage	3,000.00
158	1947	Amherst	Brooder House	5,000.00
159	1941	Amherst	Storage	1,000.00
160	1959	Amherst	Poultry House	8,000.00
163	1947	Amherst	Brooder House	100.00
164	1947	Amherst	Brooder House	100.00
165	1947	Amherst	Shelters	1,000.00

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
166	1894	Amherst	Horse Barn	$ 5,000.00
168	1885	Amherst	West Experiment Station Laboratory	27,000.00
169	1906	Amherst	Wilder Hall Classrooms	45,662.00
170	1960	Amherst	Maintenance - Physical Plant	627,000.00
171	1934	Amherst	Goodell Library	1,940,873.00
172	1960		Goodell Library - Addition	
173	1960	Amherst	Orlyte Greenhouse	500.00
177	1920	Amherst	Horticulture Shed	400.00
178	1933	Amherst	Horticulture Shed	1,254.00
179	1920	Amherst	Center Storage Shed	800.00
181	1918	Amherst	Tractor Garage	73.00
182	1911	Amherst	Brooder House	3,100.00
184	1940	Amherst	Poultry House	10,000.00
185	1918	Amherst	Tool Shed	98.00
186	1915	Amherst	Poultry House	50.00
187	1915	Amherst	Shed	100.00
188	1914	Amherst	Poultry House	1,250.00
189	1910	Amherst	Dairy Building	33,211.00
190	1910		Dairy Building	
191	1958		Silo	
192	1958	Amherst	Harvestore Silo	2,000.00
193	1941	Amherst	Barn	4,000.00
194	1910	Amherst	Machinery Shop	4,000.00
195	1928	Amherst	Farm Horse Barn	6,194.00
196	1938	Amherst	Dairy Barn	8,000.00
197	1909	Amherst	Dairy Barn	6,500.00
198	1939	Amherst	Young Stock Barn	36,837.00
199	1939	Amherst	Silo	200.00
200	1939	Amherst	Silo	200.00
201	1939	Amherst	Beef Barn Unit - Barn	5,500.00
202	1939	Amherst	Silo	200.00
203	1939	Amherst	Young Stock Hay Barn	5,000.00
204	1922	Amherst	Bull Barn	14,041.00
205	1933	Amherst	Barn	500.00
206	1927	Amherst	Sheds	50.00
207	1929	Amherst	Brooks Poultry House	200.00
209	1924	Amherst	Brooks Tobacco Shed	3,000.00
210	1957	Amherst	Brooder House	100.00
211	1958	Amherst	Poultry House	2,500.00
212	1958	Amherst	Poultry House	2,500.00
213	1951	Amherst	Comfort Station	20.00
214	1926	Waltham	Laboratory	56,500.00
215	1928		Laboratory	
216	1934		Laboratory	
217	1957		Greenhouse	
218	1924		Barn	
219	1924		Shed	
220	1924		Laboratory	
221	1924		House	
222	1924		Barns	
223	1924		Greenhouse	
224	1929		Greenhouse	
225	1950		Shed	
226	1929		Greenhouse	
227	1935		Propagating Building	
228	1959		Greenhouse	
229	1949		Administration	
230	1949		Power Supply Facility	
231	1924		Garage	
232	1924		Poultry House	
233	1952	E. Wareham	Laboratory	3,050.00
234	1957		Garage	
234	1957		Shop	
235	1926		Pumping Station	
236	1955		Laboratory	
237	1957		Greenhouse	
238	1958		Pumping Station	
239	1960		Laboratory	
240	1960		Storage	

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
241	1920	Amherst	Pomology Garage	$ 3,185.00
242	1951	Amherst	Poultry House	4,127.00
243	1958	Amherst	Poultry House	7,148.00
244	1958	Amherst	Poultry House	7,147.00
245	1950	Amherst	Poultry House	7,675.00
246	1947	Amherst	Brooder House	100.00
247	1947	Amherst	Brooder House	100.00
248	1947	Amherst	Brooder House	100.00
249	1947	Amherst	Brooder House	100.00
250	1947	Amherst	Brooder House	100.00
251	1947	Amherst	Brooder House	100.00
252	1947	Amherst	Brooder House	100.00
253	1947	Amherst	Brooder House	100.00
254	1957	Amherst	Brooder House	100.00
255	1957	Amherst	Brooder House	100.00
256	1957	Amherst	Brooder House	100.00
257	1957	Amherst	Brooder House	100.00
258	1957	Amherst	Brooder House	100.00
259	1927	Amherst	Open Corn Crib Shed	100.00
260	1927	Amherst	Open Corn Crib Shed	100.00
261	1927	Amherst	Open Corn Crib Shed	100.00
262	1927	Amherst	Open Corn Crib Shed	100.00
263	1927	Amherst	Open Corn Crib Shed	100.00
264	1927	Amherst	Open Corn Crib Shed	100.00
265	1920	So. Deerfield	House	27,950.00
268	1948		Storage	
269	1947		Storage	
270	1939		Storage	
271	1946		Storage	
273	1941		Storage	
274	1935		Storage	
275	1947		Storage	
276	1933		Storage	
278	1922	Belchertown	House	21,400.00
279	1920		Barn	
280	1920		Barn	
281	1920		Storage	
282	1920		Shed	
289	1962	Amherst	Marks Meadow - Laboratory	1,844,690.00
290	1962	Amherst	Laboratory & Classrooms - Morrill Science Center III	1,452,177.00
291	1962	Amherst	Infirmary	961,459.00
292	1962	Amherst	Cold Storage	641,191.00
293	1962	Amherst	Labs. & Classroom - Engineering & Physics	682,187.00
296	1963	Amherst	Holdsworth - Laboratory & Classroom	1,213,340.00
297	1910	Amherst	House - Bigelow	3,600.00
298	1910	Amherst	Barn - Bigelow	600.00
299	1910		Poultry House - Bigelow	
300	1910		Garage - Bigelow	
309	1910	Amherst	House - Wysocki	3,250.00
310	1910	Amherst	Barn - Wysocki	1,250.00
311	1910		Shed - Wysocki	
312	1910		Shed - Wysocki	
313	1959	Nantucket	House	3,500.00
314	1961	Nantucket	Garage	700.00
315	1959	Nantucket	Apartment	1,200.00
315	1959		Garage	
316	1953	Nantucket	Beach House	600.00
317	1963	Amherst	Classrooms & Lab. - Business Administration	1,412,091.00
318	1963	Amherst	Classrooms & Lab. - Hasbrouck Addition	1,899,019.00
319	1963	Amherst	Boyden Gymnasium	2,718,112.00
320	1949	Amherst	House - Holmes	4,000.00
321	1920		Barn - Holmes	
322	1920		Barn - Holmes	
328	1963	Hadley	Shed	600.00
329	1965	Amherst	Auditorium - Mahar	231,117.00
335	1965	Amherst	Observatory	10,000.00

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
336	1965	Amherst	Mobile Classroom	$ 8,265.00
337	1965	Amherst	Mobile Classroom	8,265.00
338	1965	Amherst	Mobile Classroom	8,265.00
339	1965	Amherst	Mobile Classroom	8,265.00
340	1965	Amherst	Mobile Classroom	8,265.00
341	1965	Amherst	Greendhouse (Orlyte)	18,664.00
342	1965	Amherst	Kiln	14,500.00
343	1966	Amherst	Classrooms and Laboratory - Engineering East	1,340,133.00
344	1966	Amherst	Classrooms and Laboratory - Chenoweth Addition	1,372,637.00
347	1966	Amherst	Classrooms and Laboratory - Morrill Science IV	3,473,955.00
358	1966	Amherst	Coal Handling Facilities	231,764.00
377	1967	Amherst	Maple Decline Lab.	2,500.00
383	1967	Amherst	Poultry #1 Tillson	343,393.00
384	1967		Poultry #2 Tillson	
385	1967		Poultry #3 Tillson	
386	1967		Poultry #4 Tillson	
387	1967	Amherst	Classrooms and Laboratory - Agricultural Engineering	320,700.00
388	1967	Amherst	Whitmore Administration	2,758,334.00
394	1920	Amherst	Dzuiba House	6,170.00
395	1920	Amherst	Dzuiba - Garage	1,980.00
396	1965	Amherst	Dzuiba - Pool	1,540.00
397	1968	Amherst	Storage - Flammable	1,337,804.00
398	1968		Storage - Physical Plant	
398	1968		Administration - Physical Plant	
403	1968	Amherst	Classrooms and Laboratory - Astronomy	205,000.00
404	1968	Amherst	Tillson Shed - Sheep	11,000.00
405	1968	Amherst	Administration - Thompson	2,728,640.00
406	1968	Amherst	Classrooms and Laboratory - Herter	3,428,448.00
407	1925	Amherst	House - Dickinson	12,920.00
408	1925	Amherst	Garage - Dickinson	1,370.00
409	1968	Amherst	Sawmill - Tillson	8,000.00
410	1968	E. Wareham	Laboratory and Classroom - Biology	211,000.00
413	1970	Amherst	Student Union - Lincoln Center	
414	1970	Amherst	Garage Parking - Campus Center	
422	1968	Amherst	Storage - Lumber - Physical Plant	10,000.00
423	1968	Amherst	Tank - Water	75,000.00
424	1928	Amherst	House - McIntire	12,100.00
425	1958	Amherst	House - Waskiewicz	8,000.00
430	1969	Amherst	Guard House - Traffic Control #1	4,000.00
431	1969	Amherst	Guard House - Traffic Control #2	4,000.00
432	1969	Amherst	Guard House - Traffic Control #3	4,000.00
433	1969	Amherst	Guard House - Traffic Control #4	4,000.00
434	1969	Amherst	Guard House - Traffic Control #5	4,000.00
435	1969	Amherst	Guard House - Traffic Control #6	4,000.00
			Total	$58,893,880.00

Inventory of Improvements Other Than Buildings

	Book Value June 30, 1970
Roads, Sidewalks and Parking Areas	$ 3,026,671.88
Sewer, Water and Drainage System	2,124,435.46
Steam Lines	4,958,015.05
Electric Lines	4,269,004.97
Tennis Court	90,894.25
Playing Fields	1,082,678.12
Coal Handling	444,852.43
Total	$15,996,552.16

UNIVERSITY OF MASSACHUSETTS

at Boston

Comparative Statement of Funds Forwarded to State Treasurer

on account of Income from Fees, Sales and Services

	1969		1970	
Instruction				
Tuition - Boston	$617,967.50		$674,815.45	
Tuition - Summer School Boston	53,276.00		41,247.00	
Total		$671,243.50		$716,062.45

Schedule A-9

State Appropriation

Comparative Statement by Subsidiary Accounts

Subsidiary Account		1968	1969	1970	
General Maintenance					
1350-02-01	Salaries, Permanent Positions	$ 1,949,000.00	$ 2,554,000.00	$ 4,054,479.00	
1350-02-02	Salaries, Other	500,000.00	518,000.00	15,000.00	
1350-02-03	Services, Non-Employees	535,000.00	755,000.00	770,000.00	
1350-02-04	Food for Persons	-0-	-0-	-0-	
1350-02-05	Clothing	-0-	-0-	-0-	
1350-02-06	Housekeeping Supplies and Expenses	1,500.00	1,500.00	1,500.00	
1350-02-07	Laboratory, Medical and General Care	2,500.00	3,000.00	3,000.00	
1350-02-08	Heat and Other Plant Operations	70,000.00	80,000.00	75,500.00	
1350-02-09	Farm and Grounds	-0-	-0-	-0-	
1350-02-10	Travel and Automotive Expenses	15,000.00	20,000.00	17,500.00	
1350-02-11	Advertising and Printing	14,500.00	20,000.00	40,500.00	
1350-02-12	Repairs, Alterations and Additions	37,000.00	25,000.00	36,000.00	
1350-02-13	Special Supplies and Expenses	268,000.00	213,000.00	165,000.00	
1350-02-14	Office and Administrative Expenses	65,000.00	80,000.00	79,000.00	
1350-02-15	Equipment	165,000.00	172,500.00	240,000.00	
1350-02-16	Rentals	596,500.00	922,000.00	996,500.00	
	Total	$ 4,219,000.00	$ 5,364,000.00	$ 6,493,979.00	(a)(b)(c)(d)(f)
Other Maintenance					
1350-51-13	Library	$ 100,000.00	$ 100,000.00	$ 500,000.00	
1350-81-03	Disadvantaged Students	-0-	-0-	45,700.00	
1350-81-10	Disadvantaged Students	-0-	-0-	300.00	
1350-81-13	Disadvantaged Students	-0-	-0-	94,000.00	
7416-9102-12	Renovations	-0-	-0-	275,000.00	
	Total	$ 100,000.00	$ 100,000.00	$ 915,000.00	(a)
Capital Outlay					
8068-28	Renovation and Improvement	$ 750,000.00	$ -0-	$ -0-	
8069-70	Renovation and Improvement	-0-	1,510,000.00	-0-	
8069-71	Library Books	-0-	250,000.00	-0-	
8301-11	Design and Construction of New Campus	-0-	-0-	8,200,000.00	(e)
	Total	$ 750,000.00	$ 1,760,000.00	$ 8,200,000.00	
	Grand Total	$ 5,069,000.00	$ 7,224,000.00	$15,608,979.00	

(a) Authorized by Chapter 452 of the Acts of 1969

(b) Authorized by Chapter 370 of the Acts of 1970

(c) Authorized by Chapter 811 of the Acts of 1969

(d) Includes transfer from Budget Bureau for upgrading and salary increase

(e) Transfer from Bureau of Building Construction

(f) Authorized by Chapter 113 of the Acts of 1970

State General Maintenance Appropriation

Summary of Expenditures by Functional Division and Subsidiary Accounts

Account Number and Name	Appropriation and Allotment	Expenditures and Encumbrances			Total Expenditure and Enc.	Balance of Appropriation June 30, 1970
		Administration	Instruction	Operation of Plant		
1350-02						
01 Salaries, Permanent	$4,054,479.00	$350,552.34	$3,644,655.57	$ 58,822.00	$4,054,029.91	$ 449.09
02 Salaries, Other	15,000.00	1,313.25	348.99	8,606.20	10,268.44	4,731.56
03 Services, Non-Employee	770,000.00	161,821.77	338,036.92	254,471.24	754,329.93	15,670.07
04 Food	-0-	-0-	-0-	-0-	-0-	-0-
05 Clothing	-0-	-0-	-0-	-0-	-0-	-0-
06 Housekeeping Supplies & Expenses	1,500.00	563.44	181.00	709.35	1,453.79	46.21
07 Laboratory, Medical and General Care	3,000.00	91.00	2,908.71	-0-	2,999.71	.29
08 Heat and Other Plant Operations	75,500.00	500.00	-0-	74,969.00	75,469.00	31.00
09 Farms and Grounds	-0-	-0-	-0-	-0-	-0-	-0-
10 Travel and Automotive Expenses	17,500.00	20,588.56	6,488.83	(9,650.54)	17,426.85	73.15
11 Advertising and Printing	40,500.00	18,048.19	21,755.46	158.29	39,961.94	538.06
12 Repairs, Alterations & Additions	36,000.00	5,691.09	5,618.49	24,239.30	35,548.88	451.12
13 Special Supplies & Expenses	165,000.00	48,540.51	116,151.37	89.05	164,780.93	219.07
14 Office & Administrative Expenses	79,000.00	78,579.61	387.58	9.50	78,976.69	23.31
15 Equipment	240,000.00	79,566.19	147,518.30	12,895.89	239,980.38	19.62
16 Rentals	996,500.00	-0-	16,492.86	965,962.78	982,455.64	14,044.36
Total	$6,493,979.00	$765,855.95	$4,300,544.08	$1,391,282.06	$6,457,682.09	$36,296.91 (a)
Other Maintenance						
1350-51-13 Library Books	$ 500,000.00	$ -0-	$ 500,000.00	$ -0-	$ 500,000.00	$ -0-
1350-81-03 Disadvantaged Students	45,700.00	-0-	42,921.57	-0-	42,921.57	2,778.43 (a)
1350-81-13 Disadvantaged Students	94,000.00	-0-	93,333.40	-0-	93,333.40	666.60 (a)
1350-81-10 Disadvantaged Students	300.00	-0-	300.00	-0-	300.00	-0-
7416-9102-12 Renovation	275,000.00	-0-	-0-	-0-	-0-	275,000.00 (b)
Total	$ 915,000.00	$ -0-	$ 636,554.97	$ -0-	$ 636,554.97	$278,445.03
Grand Total	$7,408,979.00	$765,855.95	$4,937,099.05	$1,391,282.06	$7,094,237.06	$314,741.94

(a) Balances reverted to State Treasurer

(b) Balance carried forward to Fiscal Year 1971

Schedule A-11

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Boston Branch				
C11	Chancellor's Office	$ 401,880.76	$ 692,210.19	$ 79,152.66	$ 1,173,243.61
C21	Business and Financial Management	111,806.60	23,530.55	8,366.40	143,703.55
C22	Matching Funds	-0-	24,696.45	-0-	24,696.45
C31	Student Personnel	232,074.87	28,124.73	101,272.80	361,472.40
C32	Health Service	-0-	2,876.40	64,318.34	67,194.74
C33	Off Campus Work Study	-0-	-0-	33,837.55	33,837.55
C41	Library	221,621.94	21,934.97	23,356.70	266,913.61
C51	Art	53,161.76	4,200.26	2,179.20	59,541.22
C52	Biology	332,662.61	87,441.91	26,554.43	446,658.95
C53	Chemistry	235,276.12	59,160.86	34,807.10	329,244.08
C54	Economics	137,108.75	5,288.88	6,799.32	149,196.95
C55	English	641,351.36	12,980.04	12,292.37	666,623.77
C56	German	119,478.01	55.30	574.00	120,107.31
C57	Government	117,015.41	467.98	4,080.25	121,563.64
C58	History	399,835.76	410.50	6,210.55	406,456.81
C59	Mathematics	280,847.83	8,573.82	4,584.62	294,006.27
C60	Music	35,492.43	4,599.30	1,853.75	41,945.48
C61	Philosophy	61,578.86	142.10	701.40	62,422.36
C62	Physics	222,577.34	71,484.13	28,860.14	322,921.61
C63	Psychology	223,412.90	854.85	17,964.52	242,232.27
C64	Romance Languages	427,041.60	529.12	2,964.60	430,535.32
C65	Sociology	139,820.88	609.85	1,528.00	141,958.73
C66	Language Laboratory	22,794.81	2,506.58	10,241.25	35,542.64
C67	Humanities	41,793.42	3,207.68	369.95	45,371.05
C68	Social Sciences	23,346.57	2,053.34	742.00	26,141.91
C69	Physical Sciences	14,748.25	-0-	-0-	14,748.25
C91	Operation of Plant	321,899.44	581,114.02	3,511.60	906,525.06
	Total	$ 4,818,628.28	$1,639,053.81	$ 477,123.50	$ 6,934,805.59

*Expenditures, other than salaries and wages, not distributed by all budget departments.

Schedule A-12

Capital Outlay Expenditures and Balances

Account Number and Name		Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Balance Appropriation June 30, 1970
8301 00	Boston Loan	1971	$ 2,700,000.00	$2,695,873.88	$ 4,012.24	$ 113.88
8068 28	Renov. & Improve.	1972	750,000.00	652,315.03	66,783.32	30,901.65
8069 70	Renov. & Improve.	1973	1,510,000.00	891,687.17	544,532.88	73,779.95
8069 71	Library Books	1973	250,000.00	231,441.46	18,558.40	.14
8301 11	Campus Design & Const.	1974	8,200,000.00	-0-	1,797,437.56	6,402,562.44
			$13,410,000.00	$4,471,317.54	$2,431,324.40	$6,507,358.06

Schedule C-6

Statement of Endowment Fund Principal

Name of Fund	Balance July 1, 1969	Additions	Disbursements	Balance June 30, 1970
Endowments				
Brian Rattigan	$ -0-	$481.56	-0-	$ 481.56
John W. Ryan Faculty Convocation Award	862.91	10.00	-0-	872.91
Total	$862.91	$491.56	-0-	$1,354.47

Schedule C-7

Endowment Income

Statement of Receipts, Disbursements and Balances

Name and Purpose of Fund	Balance July 1, 1969	Receipts from Investments	Disbursements	Balance June 30, 1970
Prizes:				
Brian Rattigan	$ -0-	$ -0-	$ -0-	$ -0-
Miscellaneous Purposes:				
John W. Ryan Faculty Convocation Award	18.60	36.26	-0-	54.86
Total	$ 18.60	$ 36.26	$ -0-	$ 54.86

Schedule D-2

Statement of Student Loan Fund

Received from Student Activities Office - Amherst	$5,800.00	
Received from Student Activities Office - Boston	1,000.00	
		$6,800.00
Less Uncollected Loans Cancelled		2,554.67
Funds Available		$4,245.33
Loans Outstanding	$4,245.00	
Cash on Hand to Loan	.33	
		$4,245.33

Schedule F-13

TRUST FUNDS BOSTON CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
SCHOLARSHIPS	023102	.00	10.00	.00	.00	10.00
SCHOLARSHIPS	SECT 05	.00	10.00	.00	.00	10.00
**********						
BOSTON FOOD SERVICE	026004	3,946.31	6,163.29	.00	583.00	9,526.60
STUDENT HEALTH SERVICE BOSTON	038502	20,305.72	91,825.65	.00	94,619.36	17,512.01
AUXILIARY ENTERPRISES	SECT 06	24,252.03	97,988.94	.00	95,202.36	27,038.61
**********						
UNIVERSITY OF MASS BOSTON DEPOSIT	040800	13,634.96	5,978.53	18,430.13CR	7,510.84CR	8,694.20
CLEARING ACCOUNT	SECT 07	13,634.96	5,978.53	18,430.13CR	7,510.84CR	8,694.20
**********						

Schedule F-13 (Continued)

TRUST FUNDS BOSTON CAMPUS

STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
UNRESTRICTED CURRENT FUNDS						
BIOLOGY SUMMER FIELD PROGRAM/BOSTON	025610	.00	500.00	.00	500.00	.00
LAB FEE-U. MASS. BOSTON	032604	.00	.00	.00	.00	.00
MINOT COMPUTER TRUST	033410	.00	200.00	.00	.00	200.00
PRE REGISTRATION FEE NEW STUDENT BOSTON	035000	21,314.39	31,318.00	178.14CR	21,067.54	31,386.71
TRUST FUND INTEREST BOSTON	040505	.00	.00	7,700.00	.00	7,700.00
XEROX PRIZE BOSTON	041302	48.00	.00	48.00CR	.00	.00
UNRESTRICTED CURRENT FUNDS	SUB-TOT	21,362.39	32,018.00	7,473.86	21,567.54	39,286.71
OPERATING ACCOUNTS						
RESEARCH TRUST FUND BOSTON	035515	.00	.00	25,200.00	.00	25,200.00
UPWARD BOUND BOSTON 1967	041130	3,940.47	.00	3,021.96CR	.00	918.51
UPWARD BOUND BOSTON 1968	041140	2,366.76	.00	.00	.00	2,366.76
UPWARD BOUND BOSTON 1969	041160	.00	.00	.00	.00	.00
UPWARD BOUND BOSTON 1970	041170	.00	.00	3,097.42	.00	3,097.42
OPERATING ACCOUNTS	SUB-TOT	6,307.23	.00	25,275.46	.00	31,582.69
GENERAL PURPOSE FUND	SECT 08	27,669.62	32,018.00	32,749.32	21,567.54	70,869.40

Schedule F-13 (Continued)

TRUST FUNDS BOSTON CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
BRIAN RATTIGAN	035130	.00	481.56	.00	481.56	.00
GIFTS & GRANTS PENDING TRUSTEE ACTION	SECT 09	.00	481.56	.00	481.56	.00
**********						
COMMENCEMENT FUND BOSTON	026901	4,799.00	8,436.00	400.00CR	6,491.05	6,343.95
SUMMER PROGRAM BOSTON	037800	78.40	.00	78.40CR	.00	.00
STUDENT ACTIVITIES BOSTON	038400	34,973.38	120,134.24	400.00	104,749.68	50,757.94
YEAR OF STUDY IN FRANCE	041210	20,500.00	200.00	200.00CR	3,692.40CR	24,192.40
YEAR OF STUDY IN FRANCE 1970	041211	2,400.00	26,133.50	200.00	19,639.50	9,094.00
YEAR OF STUDY IN FRANCE 70/71	041213	.00	4,800.00	.00	.00	4,800.00
STUDENT PROGRAMS	SECT 12	62,750.78	159,703.74	78.40CR	127,187.83	95,188.29
**********						
AMERICAN CANCER SOCIETY PS50	043001	3,107.00	15,423.00	13.17CR	18,980.51	463.68CR
RESEARCH CORP COTTRELL SCHWARTZ	046800	5,807.58	.00	.00	3,281.92	2,525.66
PETROLEUM RESEARCH FOUNDATION 1833 G2,3	054350	.00	2,500.00	.00	225.00	2,275.00
ALFRED P SLOAN BR1193	057406	9,200.00	9,200.00	2,413.17CR	5,286.77	10,700.06
NONPROFIT ORGANIZATIONS & FOUNDATIONS	SECT 15	18,114.58	27,123.00	2,426.34CR	27,774.20	15,037.04
**********						

Schedule F-13 (Continued)

TRUST FUNDS BOSTON CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
OFFICE OF EDUCATION						
OEG-0-8-080642-2434	069207	.00	8,586.56	8,586.56CR	.00	.00
OEG 0-70-3892	069218	.00	.00	.00	777.50	777.50CR
OFFICE OF EDUCATION	SUB-TOT	.00	8,586.56	8,586.56CR	777.50	777.50CR
FEDERAL GRANTS AND CONTRACTS TRAINING	SECT 16	.00	8,586.56	8,586.56CR	777.50	777.50CR
NATIONAL INSTITUTE OF HEALTH						
04-058385	070102	.00	.00	13,153.76	13,153.76	.00
NATIONAL INSTITUTE OF HEALTH	SUB-TOT	.00	.00	13,153.76	13,153.76	.00
FEDERAL GRANTS AND CONTRACTS EQUIPMENT	SECT 18	.00	.00	13,153.76	13,153.76	.00

Schedule F-13 (Continued)

TRUST FUNDS BOSTON CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
NATIONAL INSTITUTE HEALTH						
NB 08573-01	081501	.00	.00	11,566.49	11,566.49	.00
GM-13558-05	082505	.00	.00	1,243.25	1,243.25	.00
GM-13689-04	082604	.00	.00	8,129.55	8,129.55	.00
GM-15538-03	083003	.00	.00	12,129.42	12,129.42	.00
NATIONAL INSTITUTE HEALTH	SUB-TOT	.00	.00	33,068.71	33,068.71	.00
NATIONAL SCIENCE FOUNDATION						
GP 5646	088202	.00	.00	141.55	141.55	.00
GB 7462	088360	.00	.00	8,775.70	8,775.70	.00
GP 8314	088513	.00	.00	2,820.03	2,820.03	.00
GP 12393	089603	.00	.00	.00	.00	.00
GP 11281	089804	.00	.00	4,562.53	4,562.53	.00
NSF GP 12393	089903	.00	.00	3,874.36	3,874.36	.00
GB 15767	090021	.00	.00	7,944.73	7,944.73	.00
NATIONAL SCIENCE FOUNDATION	SUB-TOT	.00	.00	28,118.90	28,118.90	.00
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	.00	.00	61,187.61	61,187.61	.00
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	06-20	146,421.97	331,880.33	77,569.26	339,821.52	216,050.04

Schedule F-13 (Continued)

TRUST FUNDS BOSTON CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

A C C O U N T N A M E	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
SUMMARY REPORT OF ALL SECTION						
FEDERAL FELLOWSHIP	SECT 03	.00	.00	.00	.00	.00
MISCELLANEOUS FELLOWSHIPS	SECT 04	.00	.00	.00	.00	.00
SCHOLARSHIPS	SECT 05	.00	10.00	.00	.00	10.00
AUXILIARY ENTERPRISES	SECT 06	24,252.03	97,988.94	.00	95,202.36	27,038.61
CLEARING ACCOUNT	SECT 07	13,634.96	5,978.53	18,430.13CR	7,510.84CR	8,694.20
GENERAL PURPOSE FUND	SECT 08	27,669.62	32,018.00	32,749.32	21,567.54	70,869.40
GIFTS & GRANTS PENDING TRUSTEE ACTION	SECT 09	.00	481.56	.00	481.56	.00
LIBRARY FUNDS	SECT 10	.00	.00	.00	.00	.00
MISCELLANEOUS SERVICE FUNDS	SECT 11	.00	.00	.00	.00	.00
STUDENT PROGRAMS	SECT 12	62,750.78	159,703.74	78.40CR	127,187.83	95,188.29
SPONSORED RESEARCH	SECT 13	.00	.00	.00	.00	.00
U OF M SPONSORED RESEARCH	SECT 14	.00	.00	.00	.00	.00
NONPROFIT ORGANIZATIONS & FOUNDATIONS	SECT 15	18,114.58	27,123.00	2,426.34CR	27,774.20	15,037.04
FEDERAL GRANTS AND CONTRACTS TRAINING	SECT 16	.00	8,586.56	8,586.56CR	777.50	777.50CR
FEDERAL GRANTS AND CONTRACTS-FACILITIES	SECT 17	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS EQUIPMENT	SECT 18	.00	.00	13,153.76	13,153.76	.00
FEDERAL GRANTS CONTRACTS OTHER PURPOSES	SECT 19	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	.00	.00	61,187.61	61,187.61	.00
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	03-20	146,421.97	331,890.33	77,569.26	339,821.52	216,060.04
**********						
**********						
AGENCY FUNDS	SECT 21	.00	.00	.00	.00	.00
GRAND TOTAL OF TRUST AND AGENCY FUNDS		146,421.97	331,890.33	77,569.26	339,821.52	216,060.04
**********						
**********						
**********						

Student Union - University Store - Boston

Income Statement For The Fiscal Year Ended
June 30, 1970

Sales		
Books	$240,025.17	
Supplies	39,211.30	
		$279.236.47
Cost of Goods Sold		
Beginning Inventory	$ 78,197.00	
Purchases	312,017.04	
Freight In	5,258.17	
	395,472.21	
Less: Purchase Returns & Allowances	95,567.31	
	299,904.90	
Less: Purchase Discounts	40.32	
	299,864.58	
Less: Ending Inventory	69,960.00	
		$229,904.58
Gross Profit on Sales		$ 49,331.89
Operating Expenses		
Payroll - Regular	$ 21,659.48	
Payroll - Student	6,164.22	
Payroll - Hourly	5,108.39	
Outside Labor	2,850.75	
Employees' Group Insurance	556.21	
Office Supplies	710.85	
Store Supplies	4,012.86	
Telephone & Telegraph	574.45	
Postage	767.40	
Advertising	150.26	
Travel & Education	416.75	
Doubtful Accounts	63.40	
Repairs & Maintenance	1,350.74	
Cash Shortages	1,255.94	
Miscellaneous	317.76	
		$ 45,959.46
Net Income (Loss) from Operations		$ 3,372.43
Other Income		
Laboratory Fees	$ 2,063.90	
Xerox & Duplicating	1,743.75	
Cash Overage	5.38	
Miscellaneous	1.44	
		$ 3,814.47
		$ 7,186.90
Other Expenses		
Xerox Service Expenses	$ 2,161.06	
		$ 2,161.06
Net Income (Loss) for Period		$ 5,025.84

Schedule F-15

Student Union - University Store - Boston

Balance Sheet As Of
June 30, 1970

ASSETS		
Current Assets:		
Cash in Bank		$ 8,676.02
Cash on Hand		1,000.00
Accounts Receivable		11,187.86
Accounts Receivable - Book Vendors		76,915.85
Accounts Receivable - Supply Vendors		1,683.44
Inventory - Books		58,062.00
Inventory - Supplies		11,898.00
Prepaid Expenses		315.00
Total Current Assets		$169,738.17
Fixed Assets:		
Office Furniture and Fixtures	$ 16,108.89	
Less: Accumulated Depreciation	1,279.05	
		$ 14,829.84
Machinery and Equipment	$ 3,917.32	
Less: Accumulated Depreciation	140.83	
		3,776.49
Total Assets		$188,344.50
LIABILITIES AND CAPITAL		
Current Liabilities:		
Accounts Payable		$ 57,032.86
Accrued Payroll		288.28
Accrued Taxes - Mass. Sales Tax		21.98
Laboratory Fees		5,722.81
Total Current Liabilities		$ 63,065.93
Long-term Liabilities:		
University Store - Amherst Campus		$107,590.96
Capital:		
Retained Earnings		$ 17,687.61
Total Liabilities and Capital		$188,344.50

RETAINED EARNINGS

Balance July 1, 1969	$ 10,489.55
Insurance Payment Covering Inventory Loss	2,172.22
Net Income for the year	5,025.84
Balance June 30, 1970	$ 17,687.61

Schedule G-4

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1970
Boston	.4	$ 315,900.00
Columbia Point	192.8	1,753,640.00
Total	193.2	$2,069,540.00

Schedule G-5

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
393	1926	Boston	Classrooms and Laboratory	$1,484,100.00
			Total	$1,484,100.00

UNIVERSITY OF MASSACHUSETTS

Medical School

at Worcester

State Appropriation

Comparative Statement by Subsidiary Account

Subsidiary Account		1968	1969	1970	
General Maintenance					
1350-38-01	Salaries, Permanent Positions	$ 251,123.84	$ 292,081.60	$ 401,763.85	
1350-38-02	Salaries, Other	168.12	15,168.12	182,532.16	
1350-38-03	Services, Non-Employees	54,443.05	77,783.83	157,955.37	
1350-38-04	Food for Persons	-0-	-0-	-0-	
1350-38-05	Clothing	-0-	-0-	-0-	
1350-38-06	Housekeeping Supplies and Expense	-0-	700.00	1,652.88	
1350-38-07	Laboratory, Medical and General Care	-0-	-0-	-0-	
1350-38-08	Heat and Other Plant Operations	-0-	9,000.00	10,215.79	
1350-38-09	Farm and Grounds	-0-	500.00	-0-	
1350-38-10	Travel and Automotive Expenses	11,448.02	18,711.68	26,064.77	
1350-38-11	Advertising and Printing	5,888.00	10,940.55	30,603.91	
1350-38-12	Repairs, Alterations and Additions	684.65	8,274.44	2,679.62	
1350-38-13	Special Supplies and Expenses	10,049.94	18,247.55	41,409.85	
1350-38-14	Office and Administrative Expenses	6,187.37	13,543.39	16,219.63	
1350-38-15	Equipment	8,398.70	15,066.56	31,220.23	
1350-38-16	Rental	-0-	1,000.00	7,235.15	
	Total	$ 348,391.69	$ 481,017.72	$ 909,553.21	(a)(b)
Other Maintenance					
1350-38-00	Miscellaneous	$ 113,301.50	$ 57,284.65	$ -0-	
1350-39-13	Library	-0-	-0-	70,000.00	
	Total	$ 113,301.50	$ 57,284.65	$ 70,000.00	(c)
Capital Outlay					
8068-61	Library Books	$ 200,000.00	$ -0-	$ -0-	
8069-73	Library Books	-0-	230,000.00	-0-	
	Total	$ 200,000.00	$ 230,000.00	$ -0-	
	Grand Total	$ 661,693.19	$ 768,302.37	$ 979,553.21	

(a) Authorized by Chapter 452 of the Acts of 1969

(b) Includes transfer from Budget Bureau for upgrading and salary increase

(c) Authorized by Chapter 811 of the Acts of 1969

Schedule A-14

Capital Outlay Appropriation

Under Supervision and Control of the

Bureau of Building Construction

8067-98	Item 8067-98 of section two of chapter two hundred and seventy-six of the acts of nineteen hundred and sixty-seven is hereby further amended by striking out, in lines fifteen and seventeen, the words "twenty-two million five hundred" and inserting in place thereof, in each instance, the words:--eighteen million seven hundred and sixty.	
8070-10	For the acquisition of certain land in the city of Worcester for a site for the medical school, or land with buildings thereon, by purchase or by eminent domain under chapter seventy-nine of the General Laws; provided, that no payment shall be made for the purchase of said property until an independent appraisal of the value of the property has been made by a qualified, disinterested appraiser; for the preparation of a master plan and the necessary engineering for the development of the site; for the preparation of plans for medical science facilities, a teaching hospital and housing facilities; for the development of the site and for the construction of medical science facilities, including the cost of furnishings and equipment and necessary utility services; and, provided further, that except for the preparation of plans, expenditures for the construction of buildings shall be contingent upon the prior approval by the proper federal authorities and assurance by such authorities that the federal allocation will be not less than eighteen million seven hundred and sixty thousand dollars for the establishment of said medical school; to be in addition to the amount authorized in item 8067-98 of section two of said chapter two hundred and seventy-six	19,600,000.00 (a)
8070-44 U66-5	For certain renovations and improvements to the H. E. Shaw building for the medical school in the city of Worcester, including the cost of furnishings and equipment; total project cost not to exceed one million three hundred thousand dollars; to be in addition to the amount appropriated in item 8069-72 of section two of chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight; provided that said buildings shall be included in the master plan of said medical school	1,200,000.00 (b)

(a) Authorized by Chapter 138 of the Acts of 1969

(b) Authorized by Chapter 797 of the Acts of 1969

State General Maintenance Appropriation

Summary of Expenditures by Functional Division and Subsidiary Account

Account Number and Name 1350-38		Appropriation and Allotment	Expenditure		Total Expenditure	Balance of Appropriation June 30, 1970
			Administration	Instrustion		
01	Salaries, Permanent	$401,763.85	$277,165.20	$ 5,607.47	$282,772.67	$118,991.18
02	Salaries, Other	182,532.16	83,973.23	4,466.00	88,439.23	94,092.93
03	Services, Non-Employee	157,955.37	116,732.75	-0-	116,732.75	41,222.62
04	Food	-0-	-0-	-0-	-0-	-0-
05	Clothing	-0-	-0-	-0-	-0-	-0-
06	Housekeeping Supplies and Expenses	1,652.88	227.81	-0-	227.81	1,425.07
07	Lab., Med. and General Care	-0-	-0-	-0-	-0-	-0-
08	Heat and Other Plant Operations	10,215.79	4,367.26	-0-	4,367.26	5,848.53
09	Farm and Grounds	-0-	-0-	-0-	-0-	-0-
10	Travel and Automotive Expense	26,064.77	7,602.43	-0-	7,602.43	18,462.34
11	Advertising and Printing	30,603.91	29,328.20	-0-	29,328.20	1,275.71
12	Repairs, Alterations and Additions	2,679.62	856.67	-0-	856.67	1,822.95
13	Special Supplies and Expenses	41,409.85	8,542.69	-0-	8,542.69	32,867.16
14	Office and Administrative Expenses	16,219.63	12,100.37	-0-	12,100.37	4,119.26
15	Equipment	31,220.23	12,965.15	-0-	12,965.15	18,255.08
16	Rentals	7,235.15	4,525.21	-0-	4,525.21	2,709.94
	Total	$909,553.21	$558,386.97	$10,073.47	$568,460.44	$341,092.77
Other Maintenance						
1350-39-13	Library Books	$ 70,000.00	-0-	$70,000.00	$ 70,000.00	-0-
	Grand Total	$979,553.21	$558,386.97	$80,073.47	$638,460.44	$341,092.77 (a) (b)

(a) Unencumbered balances carried forward to Fiscal Year 1971 $284,790.51
(b) Encumbrances carried forward to Fiscal Year 1971 56,302.26

Schedule A-16

1970 Fiscal Year Expenditure Report

by Budget Divisions

Dept. Code		State Funds Salaries and Wages	State Funds Other Expenditures	Other Funds Salaries and Wages*	Net Total
	Worcester Branch				
I 21	Medical School Administration	$459,964.44	$80,515.79	$21,952.07	$562,432.30
I 41	Medical School Library	17,906.74	-0-	-0-	17,906.74
I 51	Medical School Instruction	10,073.47	-0-	625.00	10,698.47
	Total	$487,944.65	$80,515.79	$22,577.07	$591,037.51

*Expenditures, other than salaries and wages, not distributed by all budget departments.

Schedule A-17

Capital Outlay Expenditures and Balances

Account Number and Name	Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Balance of Appropriation June 30, 1970
8066 98 Medical School Loan	1970	$ 600,000.00	$511,204.75	$ 23,676.85	$ 65,118.40
8067 31 Library Books	1971	230,000.00	229,798.29	-0-	201.71
8068 61 Library Books	1972	200,000.00	62,836.87	75,331.25	61,831.88
8069 73 Library Books	1973	230,000.00	-0-	21,562.11	208,437.89
		$1,260,000.00	$803,839.91	$120,570.21	$335,589.88

Schedule F-16

TRUST FUNDS WORCESTER CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
UNRESTRICTED CURRENT FUNDS						
ANATOMICAL TRUST FUND	024404	1,635.65	156.40	922.82CR	45.70	823.53
MEDICAL SCHOOL-DEPT. OF PATHOLOGY TRAIN	028200	.00	.00	.00	.00	.00
TRUST FUND INTEREST WORCESTER	040510	.00	.00	1,100.00	.00	1,100.00
UNRESTRICTED CURRENT FUNDS	SUB-TOT	1,635.65	156.40	177.18	45.70	1,923.53
DEPARTMENTAL SERVICE FUNDS						
BIOCHEMISTRY SERVICE FUND MEDICAL SCHOOL	025505	.00	3,000.00	1,000.00	391.72	3,608.28
MEDICAL SCHOOL SERVICE FUND	033200	6,046.10	763.25	.00	1,119.95	5,689.40
DEPARTMENTAL SERVICE FUNDS	SUB-TOT	6,046.10	3,763.25	1,000.00	1,511.67	9,297.68
OPERATING ACCOUNTS						
RESEARCH TRUST FUND WORCESTER	035525	.00	.00	4,800.00	.00	4,800.00
OPERATING ACCOUNTS	SUB-TOT	.00	.00	4,800.00	.00	4,800.00
GENERAL PURPOSE FUND	SECT 08	7,681.75	3,919.65	5,977.18	1,557.37	16,021.21

Schedule F-16 (Continued)

TRUST FUNDS WORCESTER CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
U OF M MEDICAL SCHOOL LIBRARY FUND	040900	125.00	.00	.00	.00	125.00
LIBRARY FUNDS	SECT 10	125.00	.00	.00	.00	125.00
NATIONAL INSTITUTE HEALTH						
AI-08791-01	081601	.00	.00	15,572.57	15,572.57	.00
NIH AI 08791-02	081602	.00	.00	469.77	469.77	.00
AM-13904-01	082611	.00	.00	19,038.04	19,038.04	.00
NATIONAL INSTITUTE HEALTH	SUB-TOT	.00	.00	35,080.38	35,080.38	.00
NATIONAL SCIENCE FOUNDATION						
GB 7547	088401	.00	.00	4,109.05	4,109.05	.00
NATIONAL SCIENCE FOUNDATION	SUB-TOT	.00	.00	4,109.05	4,109.05	.00
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	.00	.00	39,189.43	39,189.43	.00
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	06-20	7,806.75	3,919.65	45,166.61	40,746.80	16,146.21

TRUST FUNDS WORCESTER CAMPUS
STATEMENT OF RECEIPTS, DISBURSEMENTS, TRANSFERS AND BALANCES

ACCOUNT NAME	ACCOUNT CODE	BALANCE JULY 1, 69	RECEIPTS	TRANSFERS	EXPENDED	BALANCE 06/70
SUMMARY REPORT OF ALL SECTION						
FEDERAL FELLOWSHIP	SECT 03	.00	.00	.00	.00	.00
MISCELLANEOUS FELLOWSHIPS	SECT 04	.00	.00	.00	.00	.00
SCHOLARSHIPS	SECT 05	.00	.00	.00	.00	.00
AUXILIARY ENTERPRISES	SECT 06	.00	.00	.00	.00	.00
CLEARING ACCOUNT	SECT 07	.00	.00	.00	.00	.00
GENERAL PURPOSE FUND	SECT 08	7,681.75	3,919.65	5,977.18	1,557.37	16,021.21
GIFTS & GRANTS PENDING TRUSTEE ACTION	SECT 09	.00	.00	.00	.00	.00
LIBRARY FUNDS	SECT 10	125.00	.00	.00	.00	125.00
MISCELLANEOUS SERVICE FUNDS	SECT 11	.00	.00	.00	.00	.00
STUDENT PROGRAMS	SECT 12	.00	.00	.00	.00	.00
SPONSORED RESEARCH	SECT 13	.00	.00	.00	.00	.00
U OF M SPONSORED RESEARCH	SECT 14	.00	.00	.00	.00	.00
NONPROFIT ORGANIZATIONS & FOUNDATIONS	SECT 15	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS TRAINING	SECT 16	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS-FACILITIES	SECT 17	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS EQUIPMENT	SECT 18	.00	.00	.00	.00	.00
FEDERAL GRANTS CONTRACTS OTHER PURPOSES	SECT 19	.00	.00	.00	.00	.00
FEDERAL GRANTS AND CONTRACTS-RESEARCH	SECT 20	.00	.00	39,189.43	39,189.43	.00
GRAND TOTAL - ALL TRUST FUNDS. SECTIONS	03-20	7,806.75	3,919.65	45,166.61	40,746.80	16,146.21
AGENCY FUNDS	SECT 21	.00	.00	.00	.00	.00
GRAND TOTAL OF TRUST AND AGENCY FUNDS		7,806.75	3,919.65	45,166.61	40,746.80	16,146.21

Schedule G-6

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1970
Worcester	127.7	$ 198,500.00
Total	127.7	$ 198,500.00

Schedule G-7

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1970
370	1930	Worcester	Shelter - Bus Stop Station	$ 100.00
371	1961	Worcester	Greenhouse	6,500.00
372	1913	Worcester	House - Maple	7,000.00
373	1913	Worcester	Garage - Maple	400.00
376	1894	Worcester	Apartment - Farm House	35,000.00
411	1951	Worcester	Shaw Bldg. - Administration, Classroom, Labs.	230,000.00
444	1960	Worcester	Anderson House	7,800.00
			Total	$ 286,800.00

UNIVERSITY OF MASSACHUSETTS

COLLEGE OF AGRICULTURE

ANNUAL REPORT

July 1, 1969 - June 30, 1970

A. A. Spielman, Dean

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I. BUDGET*

	1968	1969	1970
A. INSTRUCTION	$1,802,816.00	$1,655,743.00	$1,947,210.00
B. EXPERIMENT STATION			
State	919,421.00	1,184,924.00	1,414,652.00
Non-State	725,441.00	882,349.00	1,021,565.00
C. COOPERATIVE EXTENSION			
State	597,729.00	626,625.00	773,016.00
Non-State	697,286.00	791,099.00	1,042,442.00
D. CONTROL Program	379,775.00	374,404.00	468,641.00
TOTALS	$5,122,468.00	$5,515,144.00	$6,667,526.00

*Calculated from Allotment Control Register as of 6/30/70.

II. ORGANIZATIONAL CHART

DEPARTMENTS AND DIVISIONS	RESIDENT INSTRUCTION			EXPERIMENT STATION	COOPERATIVE EXTENSION	CONTROL PROGRAM
	Associate Degree	B.S. Degree	Graduate			
Agricultural and Food Economics	x	x	x	x	x	
Agricultural Engineering		x	x	x	x	
Cranberry Station				x	x	
Entomology		x	x	x	x	x
Environmental Sciences				x	x	x
Food Science and Technology	x	x	x	x	x	
Forestry and Wildlife Management	x	x	x	x	x	
4-H and Youth Programs					x	
*Home Economics Extension					x	
Hotel and Restaurant Administration	x	x			x	
Landscape Architecture	x	x	x	x		
Plant Pathology		x	x	x	x	x
Plant and Soil Sciences	x	x	x	x	x	
**Regulatory Services				x		x
Veterinary and Animal Sciences	x	x	x	x	x	x

*In School of Home Economics.
**Feed, Fertilizer, Dairy Law, and Seed Laboratory.

III. PERSONNEL - NUMBER IN EACH RANK

A. ACADEMIC PERSONNEL	September 1967	September 1968	September 1969
Dean	1	1	1
Associate Dean and Director of Stockbridge School	1	1	1
Associate Director of Extension	1	1	1
Commonwealth Head of Department	1	1	1
Head of Department "A"	9	11	11
Head of Department, academic year	1	1	2
Commonwealth Professor, academic year	1	1	1
Professor "A"	41	44	41
Professor, academic year	6	8	9
Associate Professor "A"	38	40	41
Associate Professor, academic year	7	11	10
Assistant Professor "A"	29	29	27
Assistant Professor, academic year	14	19	24
Instructor "A"	13	12	11
Instructor, academic year	3	2	4
Visiting Lecturer	3	1	2
Lecturer, "A", UM	0	0	1
Lecturer, UM	2	6	2
Lecturer, UM, 1/2 time	0	0	1
TOTAL (does not include vacancies)	171	189	191

B. NON-ACADEMIC PROFESSIONAL PERSONNEL			
Assistant to Dean andDirector	0	1	1
Assistant Director of Experiment Station and Extension Service	1	0	0
Staff Associate	1	1	1
Staff Assistant	3	3	3
Assistant Dean	0	0	1
TOTAL	5	5	6

C. APPOINTMENTS

1. Dr. Ernest M. Buck was appointed Assistant Dean of the College in October 1969. He works with high school guidance counselors, community and junior colleges in improving student career opportunities in the food, agricultural and natural resource sciences; and assists the administration and department heads in improving the educational programs for undergraduates.

2. New Faculty

Agricultural and Food Economics
Robert L. Vertrees, Instructor, UM

Agricultural Engineering
Chin Shu Chen, Assistant Professor, UM
Mrs. Chokyun Rha, Assistant Professor, UM

Entomology
Gary L. Jensen, Assistant Professor, UM
John G. Stoffolano, Jr., Assistant Professor, UM

Environmental Sciences, Waltham
Lyle E. Craker, Assistant Professor "A", UM
Adrian G. Gentile, Assistant Professor "A", UM

Forestry and Wildlife Management
Joseph S. Larson, Associate Professor, UM

4-H and Youth Programs
Mrs. Janet R. Drake, Staff Assistant
Miss Susan J. Uhlinger, Extension Specialist, UM

Hotel and Restaurant Administration
George R. Conrade, Instructor, UM

Landscape Architecture
Morton B. Braun, Lecturer, UM
William T. Davies, Visiting Lecturer "A", UM
Nicholas T. Dines, Assistant Professor, UM
Victor J. Jarm, Visiting Lecturer, UM
Harry E. Schwarz, Visiting Lecturer, UM
David W. Sears, Lecturer, UM

Plant and Soil Sciences
Duane W. Greene, Assistant Professor, UM
Paul H. Jennings, Assistant Professor, UM

Plant Pathology
Mark S. Mount, Assistant Professor, UM

Veterinary and Animal Sciences
William A. Condon, Lecturer "A", UM

3. Retirements

Agricultural and Food Economics
Ellsworth W. Bell, Professor "A", UM

Agricultural Engineering
Gerald A. Fitzgerald, Professor "A", UM

Entomology
Frank R. Shaw, Professor "A", UM
Ellsworth H. Wheeler, Professor "A", UM

Landscape Architecture
Raymond H. Otto, Professor, UM

Regulatory Services (Feed, Fertilizer, Dairy Law, and Seed Laboratory)
C. Tyson Smith, Associate Professor "A", UM

Veterinary and Animal Sciences
Richard C. Foley, Professor "A", UM

IV. STUDENTS

A. SUMMARY OF RESIDENT INSTRUCTION - 1969-70

Department	No. of Courses Taught Fall	No. of Courses Taught Spring	No. of Credits Fall	No. of Credits Spring	No. of Students Fall	No. of Students Spring	Student Credit Hours Fall	Student Credit Hours Spring
Agricultural and Food Economics	29	32	86	90	791	528	2,162	1,578
Agricultural Engineering	11	14	33	39	227	259	689	784
Entomology	7	12	21	29	325	480	713	640
Environmental Sciences	2	2	6	7	18	12	54	38
Food Science and Technology	16	18	45	47	456	388	1,165	959
Forestry and Wildlife Management	35	41	113	128	846	710	1,845	1,593
*Hotel and Restaurant Administration	15	12	36	32	677	576	1,669	1,514
Landscape Architecture	30	35	101	99	1,059	1,168	3,368	2,635
Plant and Soil Sciences	32	37	90	94	1,015	894	2,952	2,241
Plant Pathology	4	4	10	9	30	143	76	285
Veterinary and Animal Sciences	24	26	59	68	622	496	1,486	1,441
TOTALS	205	233	600	642	6,066	5,654	16,179	13,708

*New Department of Hotel and Restaurant Administration became effective 2/1/69.

B. ENROLLMENT

1. Breakdown of Student Enrollment by Majors - Fall 1969

Department and Major	Four Year	Two Year	Graduate	Department Total
Agricultural and Food Economics				144
General Agricultural Economics	14		5	
Agricultural Business Management	16	21	6	
Food Distribution		23		
Food Marketing Economics	6		10	
Lumber and Building Materials Business Management		13		
Natural Resource Economics	9		8	
International Agricultural Studies	5		8	
Agricultural Engineering	6		19	25
Entomology	7		22	29
Food Science and Technology				74
Dairy Technology		9		
Food Science and Technology	23		42	
Forestry and Wildlife Management				404
Fisheries Biology	79		19	
Forestry	81		24	
Wildlife Biology	114		34	
Wood Science and Technology	23		8	
Wood Utilization		22		
Hotel and Restaurant Administration	166	129		295
Landscape Architecture				379
Aboriculture and Park Management		116		
Environmental Design	120			
Landscape Architecture			25	
Landscape Operations		51		
Park Administration	55			
Regional Planning			12	
Plant and Soil Sciences				212
Floriculture		34		
Fruit and Vegetable Crops		15		
Plant Industry	24		24	
Plant Science	12			
Soil Science	3		12	
Turf Management		88		
Plant Pathology	3		8	11
Veterinary and Animal Sciences				238
Animal Science	105	89	29	
Laboratory Animal Management		15		
TOTALS	871	625	315	1,811

2. Undergraduate Enrollments by Major - 1962-1969

Major	1962	1963	1964	1965	1966	1967	1968	1969
Agricultural and Food Economics	13	13	11	21	26	35	43	50
Agricultural Engineering	5	4	3	3	7	8	5	6
Agronomy	8	-	-	-	-	-	-	-
Dairy Industry	12	-	-	-	-	-	-	-
*Entomology	14	12	13	13	10	12	10	7
Floriculture	8	-	-	-	-	-	-	-
Food Science	47	28	35	22	21	25	22	23
Forestry	82	73	73	90	135	129	117	104
Landscape Architecture	63	63	65	88	87	80	101	120
Olericulture	1	-	-	-	-	-	-	-
Park Administration	-	-	-	5	12	32	41	55
Plant and Soil Sciences	-	28	29	26	34	29	31	39
*Plant Pathology	-	-	-	-	-	-	-	3
Pomology	1	-	-	-	-	-	-	-
Poultry Science	4	-	-	-	-	-	-	-
Restaurant and Hotel Administration	23	26	35	58	82	129	160	166
Veterinary and Animal Sciences	24	43	53	52	66	75	97	105
Wildlife and Fisheries Biology	56	55	78	98	130	151	178	193
TOTALS	361	345	395	487	620	705	805	871

*Entomology and Plant Pathology combined from 1958 through 1967.

PER CENT OF INCREASE 1962 TO 1969: 141%

3. TOTAL CLASS ENROLLMENTS (Graduate, Undergraduate, Stockbridge)

Department	1967-68	1968-69	1969-70
Agricultural and Food Economics	1,426	1,973	1,319
Agricultural Engineering	775	470	486
Entomology	1,410*	727	805
Environmental Sciences	--	42	30
Food Science and Technology	2,388**	1,824**	844
Forestry and Wildlife Management	1,281	1,408	1,556
Hotel and Restaurant Administration	--	484	1,253
Landscape Architecture	2,284	1,964	2,227
Plant and Soil Sciences	2,428	2,242	1,909
Plant Pathology	--	182	173
***Regulatory Services	18	18	--
Veterinary and Animal Sciences	1,621	1,155	1,118
TOTALS	13,613	12,489	11,720

*Includes Plant Pathology.
**Includes Hotel and Restaurant Administration.
***Feed, Fertilizer, Dairy Law, and Seed Laboratory.

4. Freshmen and Transfer Students Enrolled - Fall 1969 (Undergraduates)

Department	Class of 1973 No. Enrolled*	Transfer Students	Total New Students
Agricultural and Food Economics	4	15	19
Agricultural Engineering	2	0	2
Entomology	3	0	3
Food Science and Technology	3	2	5
Forestry and Wildlife Management			
Fisheries Biology	16	5	21
Forestry	18	10	28
Wildlife Biology	32	8	40
Wood Technology	1	8	9
Hotel and Restaurant Administration	29	26	55
Landscape Architecture			
Environmental Design	6	16	22
Park Administration	1	10	11
Plant and Soil Sciences	6	6	12
Plant Pathology	1	0	1
Veterinary and Animal Sciences	33	16	49
TOTALS	155	122	277

*Includes 12 swing shift freshmen.

5. Source of Transfer Students - 1969

		No. of Students
Massachusetts Community Colleges		37
Berkshire Community College	7	
Cape Cod Community College	4	
Greenfield Community College	2	
Holyoke Community College	5	
Massachusetts Bay Community College	4	
Mt. Wachusett Community College	5	
Northern Essex Community College	2	
North Shore Community College	3	
Quinsigamond Community College	4	
Springfield Community College	1	
Stockbridge School of Agriculture		40
Paul Smith's School (New York)		12
Miscellaneous Colleges (in and out of state)		13
TOTAL		122

6. Applications for Entrance - September 1969

STOCKBRIDGE SCHOOL OF AGRICULTURE - Class of 1971

Major	No. Received	No. Accepted	No. Rejected	No. Withdrawals	No. Enrolled
Agricultural Business Management	17	17	0	5	12
Animal Science	91	83	8	15	68
Arboriculture and Park Management	99	70	29	9	61
Dairy Technology	4	4	0	0	4
Floriculture	26	21	5	6	15
Food Distribution	17	17	0	5	12
Fruit and Vegetable Crops	11	10	1	1	9
Hotel and Restaurant Administration	130	98	32	26	72
Landscape Operations	46	34	12	5	29
Lumber and Building Materials Business Management	12	10	2	1	9
Turf Management	65	56	9	8	48
Wood Utilization	28	21	7	7	14
TOTALS	546	441	105	88	353

7. Stockbridge School Enrollments by Major - 1962-69

Major	1962	1963	1964	1965	1966	1967	1968	1969
Agricultural Business Management	-	-	-	-	5	16	21	21
Animal Science	87	70	73	69	67	111	101	89
Arboriculture	11	-	-	-	-	-	-	-
Arboriculture and Park Management	51	98	100	100	100	99	112	116
Dairy Technology	23	26	26	21	16	21	14	9
Floriculture	39	33	33	34	33	43	39	34
Food Distribution	24	15	17	23	26	29	31	23
Food Distribution - 1 year	-	6	6	6	4	-	-	-
Food Management	48	-	-	-	-	-	-	-
Forestry	16	-	-	-	-	-	-	-
Fruit and Vegetable Crops	-	11	11	15	18	15	16	15
Fruit Growing	2	-	-	-	-	-	-	-
Laboratory Animal Management	-	-	-	-	6	*	15	15
Landscape Operations	46	43	44	48	48	51	48	51
Lumber and Building Materials Business Management	-	-	-	-	-	7	11	13
Poultry Science	14	8	8	2	-	-	-	-
Turf Management	65	82	85	84	85	70	69	88
Vegetable Crops	1	-	-	-	-	-	-	-
Wood Products	19	-	-	-	-	-	-	-
Wood Utilization	-	20	20	28	39	34	24	22
TOTALS	446	473	486	500	532	586	601	625

*Included in Animal Science.

8. Number of Graduate Students and Post-Doctoral Fellows

Department	M.S.	PH.D.	Degrees Awarded M.S.	Degrees Awarded PH.D.	Post-Doctoral Fellows
Agricultural and Food Economics	28	10	7	-	-
Agricultural Engineering	7	13	2	1	-
Cranberry Station	-	-	-	-	1
Environmental Sciences (Amherst)	*	*	3	1	3
Environmental Sciences (Waltham)	-	-	-	-	1
Food Science and Technology	21	26	5	6	1
Forestry and Wildlife Management	63	22	13	1	1
Landscape Architecture	44	-	12	-	-
Plant and Soil Sciences	17	20	5	1	-
Plant Pathology	7	4	1	1	1
Veterinary and Animal Sciences	15	14	5	3	1
TOTALS	215	100	55	18	9

*Included in totals of other departments.

Number of Degrees Awarded

Degrees	September 1967 to June 1968	September 1968 to June 1969	September 1969 to June 1970
Bachelor of Science	148	194	167
Master of Science	63	56	55
Doctor of Philosophy	9	14	18
Stockbridge School	224	249	240
TOTALS	444	513	480

9. Graduate Enrollments by Departments - 1962-69

Major	1962	1963	1964	1965	1966	1967	1968	1969
Agricultural and Food Economics	26	30	25	27	29	18	35	37
Agricultural Engineering	11	12	16	18	13	10	15	19
Agronomy	4	-	-	-	-	-	-	-
Dairy Industry	3	-	-	-	-	-	-	-
*Entomology	17	14	20	24	24	35	25	22
Floriculture	4	-	-	-	-	-	-	-
Food Science	19	21	35	46	42	51	49	42
Forestry and Wildlife Management	13	12	44	46	46	45	45	85
Landscape Architecture	5	4	15	19	30	40	42	37
Olericulture	2	-	-	-	-	-	-	-
Plant and Soil Sciences	-	8	13	19	19	29	41	36
*Plant Pathology	-	-	-	-	-	-	15	8
Pomology	2	-	-	-	-	-	-	-
Poultry Science	5	-	-	-	-	-	-	-
Veterinary and Animal Sciences	5	16	18	29	29	28	31	29
TOTALS	116	117	186	228	232	256	296	315

*Entomology and Plant Pathology combined from 1958 through 1967.

PER CENT OF INCREASE 1962 TO 1969: 171%

C. ACADEMIC HONORS - CLASS OF 1970

1. Undergraduate

Magna Cum Laude

Richard Felix Castonguay, Jr. - Forestry
Ron Etzion - Environmental Design
Philip Joseph Goldberg - Environmental Design
Robert Theodore Grow - Agricultural and Food Economics
Michael Lawrence Kasavana - Environmental Design
James Francis Meehan - Wildlife
Pamela Anne Roecker - Animal Sciences
Richard William Stanley - Forestry
Margaret Angela Sterni - Animal Sciences
Robert George Waltermire - Wildlife Biology

Cum Laude

Fourteen students graduated with academic distinction.

Senior Honors

Joseph R. Bohne - Wildlife Biology
Victor Colantonio - Landscape Architecture
Ron Etzion - Landscape Architecture
Michael Lawrence Kasavana - Hotel Administration
Richard William Stanley - Forestry

American Society of Animal Science Scholarships Awards

Students must rank scholastically among top 10% of their class in the College of Agriculture:

Mary E. Carroll
Jane L. Boddy
Faye M. Allis
Pamela A. Roecker
Margaret A. Sterni
Carolyn J. Tomkiewicz
Karen Jacobs

Honor Societies

PHI KAPPA PHI (Superior Scholarship)
Raymond P. Guries - Forestry
Robert George Waltermire - Wildlife Biology

SIGMA XI (Scientific Research)
James P. Olmedo, Jr. - Wood Technology
Pedro Barbosa - Entomology
Salman S. Wasti - Entomology
Andrew J. Main - Entomology

Honor Societies (continued)

XI SIGMA PI (Scholarship in Forestry)
Twenty-nine students elected to membership.

ALPHA ZETA (Scholarship and Leadership in Agriculture)
Jack V. Finn - Wildlife Biology
Lewis E. Gorman - Wildlife Biology

2. Stockbridge School

With Honors

Mark S. Chomyn - Turf Management
Michael Wallace - Turf Management
Paul S. McCrillis - Animal Sciences

Lear Honorary Scholastic Society
(3.4 or Higher Cumulative Average Required)

Thirty-four seniors qualified as members.

D. STUDENT ACCOMPLISHMENTS AND RECOGNITION

Department of Agricultural and Food Economics

James R. Hurley - $500 University Scholarship.

Ronald Robillard, Phillip Rosemeisl, Thaddeus Gwodz - $100 Educational Grants.

Gerald B. Ahern - $1,000 Grocery Manufacturers Association Scholarship.

Edward J. Walsh - $1,000 National Food Brokers Association Scholarship.

Arnold E. Sumner - $500 Ralston Purina Scholarship.

Mark Beaudoin - $600 Undergraduate Assistantship.

Jerome I. Virzi and Jerry Howe - graduate research assistantships, University of Rhode Island and University of Massachusetts.

Graduate Students

H. Douglas Jose - nominated for membership in Phi Kappa Phi (Scholastic Honorary Society).

Sydney Schmitchel - representative on College of Agriculture Educational Policies Committee.

Eight students were co-authors with faculty of nine publications and technical articles.

Graduate Students (continued)

Received assistantships for Ph.D. work -
Cornelis Corssmit, Washington State University
H. Douglas Jose, Oklahoma State University
Paula Roessel, University of Connecticut

Department of Entomology

Stephen A. Dennis - $100 H. A. Rosenfeld Award for outstanding research on pest control.

Department of Food Science and Technology

Ronald B. Townsend - Northeast Section, Institute of Food Technologists $75 Honorable Mention Undergraduate Award.

Clifford Starr - Institute of Food Technologists $500 Sophomore Scholarship.

Linda D. Campbell, Stephen M. Power, Clifford P. Starr, and Stuart D. Wilson - $400 General Foods Fund Freshman Scholarships.

Noel E. Anderson - Institute of Food Technologists $500 Freshman Scholarship.

Twenty-eight graduate students were elected to national honorary societies, including: Phi Kappa Phi - 4; Phi Tau Sigma - 4; Sigma Xi - 20.

Department of Forestry and Wildlife Management

Five students in wood technology received Outstanding Student Awards from the Forest Products Research Society.

Paul Diperri, wood technology, $500 New England Kiln Drying Association Scholarship.

Lewis E. Gorman - Rich Memorial Scholarship Award.

Graduate Students

Edwin B. Cady, forestry - New England Section, Society of American Foresters Essay prize.

Jay Watson serves on Student Affairs Committee of American Fisheries Society.

Patrick Fairbairn, and James Pease - developed educational program and directed seminars for Westfield school system under a Health, Education, and Welfare grant to update faculty of the elementary, junior and senior high schools in problems of the environment.

Department of Hotel and Restaurant Administration

Kathleen Lyons '72 - $1,000 Heinz Foundation Scholarship.

Department of Landscape Architecture

Roger Boissoneau, David Beauregard, and Donald Vacon - Massachusetts Tree Wardens' and Foresters' Association Scholarships.

Chung Ching Kuo, and Michael Talias, graduate students - $1,000 first prize in a national "Swimming Pool Design Competition."

Department of Plant and Soil Sciences

Edward H. Sauer '69 - presented a student paper concerned with flower bud initiation in Easter lilies at the Annual Meeting of the American Society of Horticultural Science at Pullman, Washington; awarded second prize in this national contest, and is now a graduate student at the University.

The following graduate students presented papers at the Northeast Regional Meeting of the American Society for Horticultural Science, Harvard University, January 30-31, 1970:

M. R. Shipway - Effects of Alar on Early McIntosh and Puritan Apples.

Barbara Mioduchowska - Effect of Ammonium Salts on the Greening of Cucumber Seedlings.

R. P. Creencia - Reversibility of Chilling Injury of Corn Seedlings.

M. A. Noor - An Investigation of the Metabolic Block in Neglecta-1, a Tomato Mutant.

A. T. Perez - Further Studies on the Physiological Action of the yg-6 Gene in Tomato.

R. Buckmire - Effect of Plastic Mulch on Soil Temperature and Growth of Sweet Corn.

M. Dirr - A New Herbicide for Control of Quackgrass in Woody Ornamentals.

A. T. Perez - presented a paper at the Annual Meeting of the Northeast Section of the American Society of Plant Physiologists, University of Vermont, May 1, 1970, on the "Role of Gibberelins in the Physiological Action of the yg-6 Gene in Tomato."

Department of Veterinary and Animal Sciences

American Society of Animal Science Scholarship Awards (Students must rank scholastically among top 10% of their class in the College of Agriculture):

Juniors:	Alfred M. Blackmer	Sophomores:	Janey Barge
	Kathleen Brookman		Carol Collyer
	Robert Dyer		Joanna Maher
	Janis Higgins		Steven Volpe
	Margo McGowan		Dean Wallace

Charles Burr - Ralston Purina Summer Scholarship Intern Award.

Karl Meyer - New England Sheep and Wool Growers Scholarship.

Robert Cox - Ralston Purina Senior Scholarship Award.

Six public exhibitions by the Equestrian Mounted Drill Team.

Laboratory Animal Management students have been approved as meeting the academic qualifications for Junior Animal Technician Certification.

V. STUDENT-FACULTY INTERACTION

Innovations to the existing effort to enhance student-faculty empathy resulted in increased dialogue, understanding and problem solving in virtually every phase of academic life.

- New joint committees were formed in Forestry and Wood Technology. Dialogues in the Forestry Committee resulted in a revision of curricular offerings.

- Hotel and Restaurant Administration provided an opportunity for faculty and students to meet in other than classroom context. Special meals at a faculty member's home for advisees were made a requirement in HRA Course 367. Sixteen such events were held with about 100 students participating.

  Joint committee appointed to discuss curriculum and other aspects of the departmental program. Two-year and four-year student committee members met separately with faculty members on matters of mutual concern.

- Food Science and Technology added the following joint committees to formal undergraduate/graduate/faculty committees: Graduate Studies, Undergraduate Curriculum, Food Science and Technology/Agricultural Engineering Liaison, and Safety.

  Two undergraduate and two graduate students appointed to participate in all department faculty meetings. Joint department student-faculty meeting held during student strike to promulgate and set forth department policy toward strike and problems of concern.

- Plant and Soil Sciences graduate students elected two representatives to establish closer relationships with entire departmental faculty. Graduate students now on Departmental Seminar Committee will be added to Social Committee in 1970-71. Policy changes have been made as a result of this interaction including the dropping of a foreign language as a Ph.D. requirement.

- Students appointed to departmental committees in Veterinary and Animal Sciences. A student subcommittee of Curriculum Committee prepared, and the full committee accepted, a creative new modular credit proposal.

  Use of student members of the Intercollegiate Horse Judging and Equitation Teams in statewide 4-H Horse Club events.

- Students appointed to all departmental committees except Personnel Committee in Agricultural and Food Economics.

  Graduate student appointed to Department Head Selection Committee. New Employment Opportunities Committee formed with over-all representation. Agricultural Business Society weekly coffee hour set up for students and faculty.

New Accounting Club established to reduce gap between students and faculty and between textbooks and the business world.

Student-faculty discussions begun last year have resulted in a revision and expansion of graduate policies, especially as they pertain to the Ph.D. program.

New Graduate-Student-Faculty Committee formed to further explore improvements in the graduate program.

- Joint representation on Graduate Curriculum Committee in Landscape Architecture initiated action for revised degree requirements and discussion on grading policies and teacher evaluation.

Three workshops conducted on curricula and the department's relationship to the surrounding region and related environmental issues.

Students now represented on all departmental committees except on the Administrative and Personnel Committees.

- The continuation of existing activities also contributed to over-all student-faculty communication and understanding. These joint activities included seminars, student organizations and societies, weekly bag lunches, socials, outings, policy and program committees, and field trips.

- There was also an increase in faculty participation on student organization governing boards, seminar committees, in program planning, scholarship matters, in sponsored events, and as advisers to student groups.

VI. NEW COURSES, SEMINARS AND COLLOQUIA

A. NEW COURSES

Agricultural Engineering

365/665 Physiological Unit Operations
765 Engineering Analysis of Biological Systems

Entomology

381/681 Economic Entomology II

Environmental Sciences

301/601 Introductory Environmental Sciences (E)
303/603 Air Pollution Biology

Fisheries Biology

267/567 Laboratory in Principles of Fishery Biology

Food Science and Technology

101 The Struggle for Food (E)
860 Natural Pigments in Foods: Chemistry and Processing Implications

Hotel and Restaurant Administration

310 Hotel Systems and Operations
311 Food and Beverage Systems and Operations

Landscape Architecture

713 Seminar in Professional Topics in Landscape Architecture
714 Seminar in Professional Topics in Landscape Architecture

Plant and Soil Sciences

717 Plant-Water Relationships

Veterinary and Animal Sciences

361/661 Intermediate Biometry

B. COURSE MODIFICATIONS

Hotel and Restaurant Administration

300 Hotel and Restaurant Merchandising

Plant Pathology

805 Advanced Plant Pathology; Host-Parasite Relationships

C. SEMINARS AND COLLOQUIA (Selected Examples)

"WORLD FOOD PROBLEMS." Robert C. Tetro, U. S. representative to the Foreign Agricultural Organization. (Agricultural and Food Economics)

"RELATIONSHIP OF ECONOMIC RESEARCH AND AGRICULTURAL POLICY FORMULATION." Dr. M. L. Upchurch, Administrator, Economic Research Service, U. S. Department of Agriculture. Ibid.

"NEMATODES AS A MODEL TO STUDY AGING." Dr. David Gershon, Department of Biochemistry, Technion, Haifa, Israel. (Cranberry Station)

"VIRUS TRANSMISSION BY NEMATODES." Dr. Eli Cohn, National and University Institute of Agriculture, Bait Degan, Israel. Ibid.

"BIOLOGY OF MOSQUITO IRIDESCENT VIRUSES." Dr. Milan Trpis, World Health Organization, Dar es Sa-laam, Tanzania. (Entomology)

"PHEROMONE COMMUNICATION SYSTEMS IN THE GENUS APIS." Dr. Robert Morse, Department of Entomology and Limnology, Cornell University. Ibid.

"ION EXCHANGE CHROMATOGRAPHY PRINCIPLES AND FIELDS OF APPLICATION." Frederick G. Kalfour, Pharmacia Fine Chemicals, Inc. (Food Science and Technology)

"PHENOLIC COMPONENTS OF HARDWOOD SAWDUST, SMOKE AND SMOKED FOODS." Dr. Phillip Issenberg, Department of Nutrition and Food Science, Massachusetts Institute of Technology. Ibid.

"THE DOMESTICATION OF BACTERIA: A NEW SOURCE OF PROTEIN FOR MANKIND." Dr. Joseph R. Champagne, Nestle Co., Inc. Ibid.

Weekly natural resource seminar with visiting speakers from industry, government and universities, plus faculty and graduate students. (Forestry and Wildlife Management)

"POLITICAL DECISIONS ON ENVIRONMENTAL ISSUES." Dr. Calvin Stillman, Professor of Environmental Affairs, Rutgers University. (Landscape Architecture)

"NEW TOWNS." Cy Paumier, chief landscape architect for new town of Columbia, Maryland. Ibid.

"CROP PRODUCTION PROBLEMS WITH CHEMICAL AIR POLLUTANTS." Howard Haggestad, Principal Plant Pathologist, Agricultural Research Service, U. S. Department of Agriculture. (Plant and Soil Sciences)

"RELATIONSHIP BETWEEN VEGETATIVE AND REPRODUCTIVE DEVELOPMENT IN HIGHER PLANTS." Roy M. Sachs, Plant Physiology Division, Fort Detrick, Frederick, Maryland. Ibid.

"THE INHIBITION AND PHOTOSYNTHESIS OF OXYGEN." Martin Gibbs, Department of Biology, Brandeis University. Ibid.

"MYCOPLASMS." Dr. Carl Maramorosch, Boyce Thompson Institute AIBS lecturer. (Plant Pathology)

"DECAY OF NORTHERN HARDWOODS." Dr. Alex Chigo, U. S. Forest Service. Ibid.

VII. FACULTY

A. SUMMARY OF FACULTY PUBLICATIONS

Department	Scientific and Technical Publications	Extension Publications	Books	Book Reviews
Agricultural and Food Economics	14	48	-	-
Agricultural Engineering	18	1	-	-
Cranberry Station	19	2	2	4
Entomology	10	4	-	-
Environmental Sciences (Amherst)	19	-	-	-
Environmental Sciences (Waltham)	48	10	-	-
Food Science and Technology	33	3	-	1
Forestry and Wildlife Management	27	9	-	-
4-H and Youth Programs	-	2	-	-
Hotel and Restaurant Administration	3	-	-	2
Landscape Architecture	7	1	-	2
Plant and Soil Sciences	26	34	-	1
Plant Pathology	1	13	-	-
*Regulatory Services	4	-	-	-
Shade Tree Laboratories	8	1	-	-
Veterinary and Animal Sciences	38	7	-	-
TOTALS	275	135	2	10

*Feed, Fertilizer, Dairy Law, and Seed Laboratory.

B. FACULTY RESEARCH GRANTS*
(Number and Value)

Department	National Science Foundation No.	National Science Foundation Face Value	National Institutes of Health No.	National Institutes of Health Face Value	Other Federal Agencies No.	Other Federal Agencies Face Value	Industry, Foundations, State Agencies No.	Industry, Foundations, State Agencies Face Value
Agricultural and Food Economics							1	$ 43,500.00
Agricultural Engineering	1	15,000.00	1	25,000.00	5	74,400.00	1	25,000.00
Cranberry Station			1	13,920.00			11	17,050.00
Entomology							3	5,393.00
Environmental Sciences	1	28,300.00	1	45,000.00	5	227,278.00	8	105,321.40
Food Science and Technology			5	78,917.00			9	109,000.00
Forestry and Wildlife Management	1	23,300.00			7	179,050.00	8	162,010.00
Landscape Architecture							2	4,000.00
Plant and Soil Sciences	1	28,223.00					10	75,563.70
Veterinary and Animal Sciences			5	244,886.00	4	138,817.00	12	69,829.00
TOTALS	4	$94,823.00	13	$407,723.00	21	$619,545.00	65	$616,667.10

GRAND TOTAL - 103 projects. $1,738,758.10 value. June 30, 1970

*Does not include Experiment Station funds or projects.

C. FACULTY AWARDS, CITATIONS AND PROFESSIONAL RECOGNITION

Department of Agricultural and Food Economics

Bragg, John H.
University representative for Scholarship Award, Pioneer Valley Lumber Dealers Association.

Christensen, Robert L.
Who's Who In the East.

Engel, N. Eugene
Invited participant, Seminar Series in Quantitative Economics, University of Connecticut, June 1970.

Foster, John H.
Invited paper with Cornelis Corssmit, Private Outdoor Recreation Development and Public Policy, Annual Meeting of New England Agricultural Economics Council, June 1969, Storrs, Connecticut.

Fuller, Earl I.
Consultant, VPI Remote Access Usage of Computer in Extension.
Invited participant at Seminar Series in Quantitative Economics, University of Connecticut, June 1970.

Jarvesoo, Elmar
"Economic Environment for Carnation Production: The Massachusetts Case," invited paper at American Carnation Society's Annual Convention, March 7, 1970.

Marion, Donald R.
Invited by the President of the United States to participate in the First White House Conference on Food, Nutrition and Health, reviewed working paper for Dr. Harold Breimeyer at the conference.
"Marketing in the Inner City," invited paper for Symposium jointly sponsored by the University of Buffalo, American Marketing Association, and the Consumer Research Institute, Buffalo, New York, June 4-6, 1970.

Russell, Sargent
"The Economics of Foreign Trade in Fish," invited paper, Seminar for Bureau of Commercial Fisheries, Gloucester, Massachusetts, February 25, 1970.

Storey, David A.
Invited participant, Community Leaders Conference on Coastal Lands and Waters of New England, sponsored by League of Women Voters, Hyannis, Massachusetts, April 7-8, 1970.
Invited participant, New England Coastal Zone Management Conference, sponsored by New England Council, Durham, New Hampshire, April 28-29, 1970.

Wyckoff, J. B.
Chairman, session at Staff Training Conference for Community Resource Development, Cornell University, September 30-October 3, 1969.
Invited participant at the Conference on Urban Land Economics, Lincoln Center for Business and Finance, Claremont Men's College, March 15-17, 1970.
Invited panelist, League of Women Voters Program on Preserving Open Space.
"Direction for the 70's," invited paper for final challenge Session of Seminar Series, Stonehill College, April 28, 1970.
Selected participant at American Water Resources Association Research Conference on Evaluation Process in Water Resources Planning, June 14-20.
Invited participant at Seminar in Quantitative Economics, University of Connecticut, June 1970.

Department of Agricultural Engineering

Pira, Edward S.
Invited to give keynote address at a week-long conference for vocational school teachers sponsored by The Electric Council of New England.

Whitney, Lester F.
Received a "Certificate of Service" for activities in the North Atlantic Region, American Society of Agricultural Engineers.
Awarded scholarship to National Science Foundation sponsored by Short Course on Land Use and Systems Analysis, Rutgers University, June 8-26, 1970.

Zahradnik, John W.
Presented an invited paper, Scale-Up of Bio-Mass Production Processes, at the University of Rhode Island Conference on Food and Drugs from the Sea, August 1969.

Cranberry Station

Zuckerman, Bert M.
Presented invitational paper, "Ultrastructure of Nematodes," to Faculty of Agriculture, Oeiras, Portugal, April 1970.

Department of Entomology

Becker, William B., John F. Hanson, Frank R. Shaw, and Miss Marion E. Smith presented plaques for professional assistance given to the National Pest Control Association at the Eastern Conference over a 30-year period.

Stoffolano, John G.
Awarded National Science Foundation Post-Doctoral Fellowship (one of 63 awarded nationally in biology) for a one-year period at Princeton University.

Department of Environmental Sciences (Amherst)

Gunner, Haim B.
Invitational lecturer at McGill University, Montreal, Canada.

Department of Environmental Sciences (Waltham)

Feder, William A.
Invitational paper for American Society of Horticultural Science Symposium on Air Pollution, Pullman, Washington.
Invitational speaker and program leader for Session on Air Pollution at 18th International Horticultural Congress, Tel Aviv, Israel.

Naegele, John A.
Invitational paper, "Impact of Agricultural Chemicals on Ecology," New England Environmental Health Societies, January 21, 1970.
Guest lecturer, Environmental Teach-In, Action for a Quality Environment, "Air Pollution Standards," November 20, 1969.
Guest lecturer, Joint Meeting Committee on Intergovernmental Science Relations and Governor's Advisory Committee on Science and Technology, "Perspectives on the Ecological Environment in Massachusetts," February 10, 1970.
Guest lecturer, Massachusetts Public Health Association, "Prospects for Control of Air Pollution in Massachusetts," Lynnfield, Massachusetts, April 22, 1970.
Seminar speaker, Southeastern Massachusetts University, "Conservation of Natural Resources - Air," November 6, 1969.
Invited testimony before the Air Quality Standards Hearing, Gardiner Auditorium, Boston, Massachusetts, November 25, 1969.

Department of Food Science and Technology

Clydesdale, Fergus M.
Presented two invited papers on the "Chemistry of Thermal Processing" at: (1) Florida Citrus Experiment Station, Lake Alfred, Florida; and (2) Department of Food Science, University of Florida, Gainesville, Florida.

Esselen, William B.
Seminar on Aseptic Packing for R. & D. Staff, Anchor Hocking Glass Corporation, Lancaster, Ohio.
Invited to participate in short course on "Food Quality Control," University of the West Indies, St. Augustine, Trinidad, June 29-July 10, 1970.

Francis, Frederick J.
Presented six invited papers: (1) "Perspectives in Food Colorimetry," Canadian Institute of Food Technologists, Ottawa, Canada; (2) "New Research in Food Colorimetry," University of British Columbia, Vancouver, Canada; (3) "Food Colorimetry," Institute of Food Technologists, Western New York Section, Buffalo, New York;

Francis, Frederick J. (continued)
(4) Instrumentation for Food Colorimetry," Massachusetts Institute of Technology, Cambridge, Massachusetts; (5) "Color Measurement as a Tool for the Plant Breeder," American Society of Horticultural Science, Pullman, Washington; and (6) "Colorimetry in the Food Industry," Hunterlab Workshop, Washington, D. C.

Hayes, Kirby M.
Invited lecturer, Organization of American States, Tropical Center of Food Research, Campinas, Sao Paulo, Brazil.
Member, Advisory Committee, Massachusetts Nutrition Survey, appointed by Commonwealth of Public Health.
Member, Board of Registration of Sanitarians, Commonwealth of Massachusetts, appointed by Governor Francis W. Sargent.
Invited to participate in short course on "Handling, Storage, Packaging and Marketing Fresh Fruits and Vegetables," University of the West Indies, St. Augustine, Trinidad, July 20-31, 1970.

Hultin, Herbert O.
Presented invited paper at the Gordon Research Conference on Food and Nutrition, New London, New Hampshire, August 4-8, 1969, "Effect of Subcellular Location on the Activity of Glycolytic Enzymes in Muscle Tissue."

Levin, Robert E.
Presented invited symposium paper at the national meeting of American Society for Microbiology, Boston, Massachusetts, April 26, 1970.
Invited to participate in Conference on Fish Preservation and Sanitation, Puerto Rico, September 1970.

Nawar, Wassef W.
Presented three invited lectures: (1) "Identification of Radiolytic Products of Triglycerides," seminar talk, International Flavors and Fragrances, Union Beach, New Jersey, February 1970; (2) "Variables Affecting Headspace Composition of Aroma Components," Society of Flavor Chemists, New York, New York, February 1970; (3) "Flavor and Headspace Composition," seminar, Heublein, Inc., Hartford, Connecticut, May 1970.

Sawyer, F. Miles
Presented invited paper at Gordon Research Conference, Issaquah, Washington.
Appointed Institute of Food Technologists Scientific Lecturer for second year and presented lectures at: (1) Maryland Section, Baltimore, Maryland; (2) Oregon Section, Portland, Oregon; (3) Puget Sound Section, Seattle, Washington; (4) Intermountain Section, Burley, Idaho; (5) Inland Empire Section, Pullman, Washington; (6) British Columbia Section, Vancouver, British Columbia; (7) Philadelphia Section, Philadelphia, Pennsylvania; and (8) Indiana Section, Indianapolis, Indiana.
Presented invited seminar for Washington State University, Pullman, Washington, and University of Idaho, Moscow, Idaho, at Pullman, Washington.

Department of Forestry and Wildlife Management

Bond, Robert S.
Invitational paper, 13th Annual Clinic National Wooden Pallet and Container Association.

Cole, Charles F.
Lecturer, Simmons College, Boston, Massachusetts.
Invited participant, Virginia Polytechnic Institute, Blacksburg, Virginia, conference on "Distributional History of the Biota of the Southern Appalachians," and Joint United States-Russian Ground Fish Survey, aboard Russian research vessel, George's Banks.

Gatslick, Harold B.
Visiting scientist, Paul Smith's College, Paul Smiths, New York.
Guest speaker, annual meeting, Empire State Forest Products Association.
Keynote speaker, Osmose Wood Treatment Symposium.

McCann, James A. and Roger J. Reed
Elected members of the American Institute of Fisheries Research Biologists.

McCann, James A.
Received a plaque for service in behalf of the Massachusetts Division of Fisheries and Game, and a Quality Increase Award from the United States Bureau of Sport Fisheries.

Noyes, John H.
Invitational papers presented at annual meeting of Ontario Professional Foresters Association, and at annual meeting of the Michigan Conservation Department.

Department of Hotel and Restaurant Administration

Lundberg, Donald E.
Principal lecturer, College Business Management Institute, July 1969.
Accepted as a volunteer in the International Executive Service Corps, a quasi-government organization providing technical assistance to less developed nations.
Presented invitational papers at: Club Managers Association of America workshops, Houston, Texas, and Chicago, Illinois; Restaurant Management Seminar, Boston University, Boston, Massachusetts.

Eshbach, Charles E.
Grant of $50,000 from the U. S. Department of Agriculture to coordinate Seminar for School Food Service Supervisors of the Northeastern States, University of Massachusetts, July 1970.
Lecturer, Maine State School Lunch Conference, Lewiston, Maine, October 1969, "Factors Concerned With Purchasing"; Conference of Culinary Arts Teachers, Westfield State College, Westfield, Massachusetts, July 1969; and Conference of Religious Homes and Centers Operators, Colebrook, Connecticut, November 1969.

Robertson, Clifford J.
Invitational papers: New York State Milk and Food Sanitarians and Food Technologists Meeting, Syracuse, New York, September 1969, "Enzymes As They Pertain to Food Fats and Their Use"; New England Association of Ice Cream and Sandwich Shop Operators, Northampton, Massachusetts, November 1969, "New Foods of the '70's"; Hampshire County Dental Society, Northampton, Massachusetts, April 1970, "Cholesterol and You."

Conrade, George R.
Invitational papers: "Computer Applications in Food Service," Seminar of Restaurant Executive Institute, Miami Beach, Florida, December 1969.
Chairman, Computer Applications in Food Service Seminar, Restaurant Executive Institute, Chicago, Illinois, October 1969.
Member of panel, Annual Meeting of Connecticut Hotel-Motel Association, Hartford, Connecticut, April 1970.

Department of Landscape Architecture

Bacon, Theodore S., Jr.
Elected chairman, Lower Pioneer Valley Regional Planning Commission.

Cudnohufsky, Walter
Co-winner (with Dr. Nick Kantartzis, Thessaloniki, Greece) of a design competition for a 60-acre tourist park and scenic bridge, Naousa, Greece.
Visiting lecturer, University of Toronto, Toronto, Canada, and The Ohio State University, Columbus, Ohio.

Dines, Nicholas T.
Co-recipient of American Institute of Architects' award for design excellence, George Patton Park, Perth Amboy, New Jersey.

Fabos, Julius
Visiting lecturer, Johns Hopkins University, Baltimore, Maryland; University of Michigan, Ann Arbor, Michigan; Massachusetts Institute of Technology, Cambridge, Massachusetts; and University of Pennsylvania, Philadelphia, Pennsylvania.
Recipient, National Science Foundation Faculty Fellowship, 1970-71.

Zube, Ervin H.
Invitational paper, "The Future of the Profession," First Annual Landscape Architecture Conference, University of Guelph, Canada.
Visiting lecturer, Ball State University, Muncie, Indiana; and The Ohio State University, Columbus, Ohio.

Department of Plant and Soil Sciences

Lachman, William H.
Presented invitational seminar, "The Development of Tetrapolid Hemerocallis," Horticulture Department, University of Maryland, College Park, Maryland.

Marsh, Herbert V., Jr.
Invitational seminar, "Some Observations and Thoughts on the Roles of Light and Gibberellins in Plant Growth," McGill University, Montreal, Canada.

Maynard, Donald N.
Invitational seminar, "Vegetable Research and Production in Massachusetts," Vegetable Crops Department, University of California, Davis, California.
Invitational seminar, "Environmental and Genetic Factors Influencing Plant Nutrition," Biomedical Division, Lawrence Radiation Laboratory, University of California, Livermore, California.

Rosenau, William A.
Acceptance to National Science Foundation sponsored short course, "Ecology for College Teachers," North Carolina University, Chapel Hill, North Carolina, June 3-July 3, 1970.

Troll, Joseph
Recipient, "Outstanding Teacher" Award, Stockbridge School Students 1970 Annual Progress Banquet, Amherst, Massachusetts.
Special recognition from Region 95 (New England) for services as advisor to Kappa Omicron Chapter, University of Massachusetts, Alpha Phi Omega National Service Fraternity.

D. FACULTY OFFICES AND COMMITTEE MEMBERSHIPS HELD IN PROFESSIONAL SOCIETIES

Department of Agricultural and Food Economics

Christensen, Robert L.
Northeast Extension Farm Management Committee.
Chairman, Resolutions Committee, New England Agricultural Economics Council.

Engel, N. Eugene
Secretary, New England Federal Milk Orders Committee.
Chairman, New England Milk Price Forecast Committee.
Advisory Committee of Lower Pioneer Valley Regional Planning Commission.

Fitzpatrick, Robert A.
Treasurer, University of Massachusetts Associate Alumni.
Chairman, Finance Committee, Ibid.

Foster, John H.
Chairman, Nominating Committee, Association of U. S. University Directors of International Agricultural Programs.
New England International Agricultural Development Council.
State Conservation Needs Inventory Committee, Soil Conservation Service.

Fuller, Earl I.
Awards Committee, American Agricultural Economics Association.
Northeast Farm Management Research Committee.

Jarvesoo, Elmar
Research Planning Committee, Horticultural Research Center of Belchertown, University of Massachusetts.
Marketing Committee, American Society for Horticultural Science.

Leed, Theodore W.
Northeast Extension Marketing Committee.
Trustee, Western Massachusetts Economics Education Council.

Wyckoff, Jean B.
Elected member for Research in Northeast Region to National Agricultural Policy Committee.
Program Committee, National Agricultural Policy Committee.
Secretary, Northeast Public Affairs Committee.
Executive Committee, New England Agricultural Economics Council.
Co-Chairman, U. S. Department of Agriculture Science and Education Committee on the Use of Electronic Data Processing in Rural Development.
Northeast Regional Resources Research Committee.
Subcommittee on Outdoor Recreation, Northeast Regional Resources Research Committee.
Lower Pioneer Valley Regional Planning District Advisory Committee on Sewer and Water.

Department of Agricultural Engineering

Clayton, Joe T.
American Society of Agricultural Engineers:
Secretary, Bio-engineering Committee.
Chairman, Position Paper Subcommittee.
Career Guidance Committee.
Permanent Subcommittee for Woemn in Engineering.
Animal Shelter Ventilation Committee.
Department Chairman Committee.
Executive Committee, Connecticut Valley Section.
New England Farm Electrification Institute:
Executive Committee.
Chairman, Research Committee.
Program Committee.

Chen, Chin Shu
EPP-49, Special Crop Processing Committee, American Society of Agricultural Engineers.

Fletcher, Stevenson W., III
American Society of Agricultural Engineers:
Executive Committee, Connecticut Valley Chapter.
Executive Committee, North Atlantic Region.
Chairman, Food Engineering 03 Technical Committee.
Secretary, Food Engineering 71 Education Committee.
Steering Committee, Food Engineering Division.

Fletcher, Stevenson W., III (continued)
Standards Committee, Food Engineering Division.
Food Engineering 9 Program Committee.
Continuing Education Committee.

Johnson, Curtis A.
American Society of Agricultural Engineers:
EPP-41, Milk Handling Equipment Committee.
SE 39, Family Housing Committee.

Rha, Mrs. Chokyum
Career Guidance Committee, American Society of Agricultural Engineers.

Whitney, Lester F.
American Society of Agricultural Engineers:
First Vice Chairman, North Atlantic Region.
Chairman, Elect Nominee, North Atlantic Region.
Power and Machinery Steering Committee.
Forest Engineering Committee.
Fruit and Vegetable Harvesting Committee.
Subsurface Irrigation Committee.
Program Committee, Engineering Society of New England Annual Conference.

Zahradnik, John W.
American Society of Agricultural Engineers:
Food, Drug and Beverage Committee.
Vice Chairman, Bio-engineering Committee.
Chairman, Controlled Atmosphere Storage Technical Committee.
Food Engineering Public Relations and Inter-Society Liaison Subcommittee.

Cranberry Station

Zuckerman, Bert M.
Translation and Exchange Committee, American Society of Nematologists.
Representative to A.I.B.S. Communications Committee.

Department of Entomology

Becker, William B.
Vice Chairman, Northeast Forest Pest Council.
Committee Member, Ornamental Insect Workshop of Eastern Branch, Entomological Society of America.
Northeast Forest Insect Work Conference.

Department of Environmental Sciences (Amherst)

Gunner, Haim B.
Associate Editor, Canadian Journal of Microbiology.
Secretary, Northeast Regional Committee on Nitrogen Transformations.
Presiding Officer, Pesticides and Microbial Degradation Session, Annual Meetings, American Society for Microbiology.
President, Massachusetts Chapter of Sigma Xi.

Litsky, Warren
American Public Health Association:
Editor, Laboratory Section, NEWSLETTER.
Program Committee.
Committee on Food Protection, Engineers and Sanitarians Section.
Committee on Food, Publications, Laboratory Section.

Mueller, William S.
Editorial Board, The Journal of Milk and Food Technology.

Walker, Robert W.
Abstractor, American Oil Chemist Society.
Organizer, Symposium on Hydrocarbon Degradation, American Oil Chemist Society.

Department of Environmental Sciences (Waltham)

Feder, William A.
TR 7, Agricultural Effects Committee, Air Pollution Control Association.
Associate Editor, ENVIRONMENTAL POLLUTION (New journal which will appear in June 1970 from Elsevier Publishers, London, England).

Galinat, Walton C.
Editorial Board of Economic Botany, Society for Economic Botany.
Committee of Maize Germ Plasm Resources (CIMMYT).

Manning, William J.
Soil Microbiology Subject-Matter Committee, American Phytopathological Society.

Naegele, John A.
Chairman, Technical Committee, Lake Cochituate Watershed Association.
Agricultural Research Institute Committee: "Agriculture in Relation to the Quality of the Environment."
Attorney General's Advisory Committee: "Environmental Problems in the Commonwealth."
Commissioner of Public Health's Ad Hoc Advisory Committee: "Ambient Air Quality Standards for Particulates and Oxides of Sulphur."
Liaison IR-4 Representative, Northeastern Region, Evaluation of Current Data and Needed Research to Determine Tolerance Limits of Chemicals for Minor Uses on Agricultural Products.
Environmental Health Technology Advisory Committee, Holyoke Community College, Holyoke, Massachusetts.

4-H and Youth Program

Howell, Mildred L.
Chairman, Legislative Committee, Massachusetts Home Economics Association.
Uhlinger, Susan J.
Chairman, Awards and Recognition Committee, Massachusetts Adult Education Committee.

Department of Food Science and Technology

Buck, Ernest M.
Secretary-elect, Northeastern Deans and Directors of Resident Instruction.

Clydesdale, Fergus M.
Undergraduate Awards Committee, Northeast Section, Institute of Food Technologists.

Esselen, William B.
Undergraduate Awards Jury, Institute of Food Technologists.
National Academy of Science - National Research Council Advisory Board on Military Academy Personnel Supplies:
General Committee on Food.
Committee on Microbiology of Food.

Evans, David A.
Chairman, Subcommittee on Cleaning and Sanitizing Dairy Equipment, Northeast Dairy Practices Committee.

Francis, Frederick J.
Institute of Food Technologists:
Chairman, Undergraduate Awards Jury.
Chairman, Nominations and Elections Committee.
Constitution and By-Laws Committee.
Scientific Lecturers Committee.
Delegate to Inter-Society Color Council.
National Councillor.
Editorial Committee, American Society for Horticultural Science.

Hankinson, Denzel J.
Editorial Board, Journal of Dairy Science.
President, Massachusetts Dairy Technology Society.
Program Committee, Massachusetts Milk Inspectors Association.

Hayes, Kirby M.
Research and Development Associates (U. S. Army, Natick Laboratories):
Director
Academic Activities Committee
Isker Award Jury
Subcommittee on Scholarships and Awards, Institute of Food Technologists.

Hultin, Herbert O.
Institute of Food Technologists:
Program Committee.
Samuel C. Prescott Research Award Committee.
Councillor, Northeast Section.

Hunting, Ward M.
Resident Clerk, Commonwealth of Massachusetts, Phi Tau Sigma, Food Science Honorary Society.
Secretary, University of Massachusetts Chapter, Phi Kappa Phi.

Levin, Robert E.
Chairman, Atlantic Fisheries Technological Conference, 1970.
President, University of Massachusetts Chapter, Phi Tau Sigma.

Nawar, Wassef W.
Committee on Communications, American Oil Chemists Society.

Potter, Frank E.
One of three judges of graduate student papers, Annual Meeting, American Dairy Science Association, Gainesville, Florida.

Sawyer, F. Miles
Committee on Sensory Evaluation of Foods, Institute of Food Technologists.
American Society for Testing and Materials Committee E-18.

Stumbo, Charles R.
Nicolas Appert Award Jury, Institute of Food Technologists.
National Academy of Science - National Research Council Advisory Board on Military Academy Personnel Supplies:
Food Irradiation Advisory Committee to the Armed Forces.

Department of Forestry and Wildlife Management

Abbott, Herschel G.
Chairman, Nominating Committee, and Chairman, Committee to Revise By-Laws, New England Section, Society of American Foresters.

Gatslick, Harold B.
Committee on Treatment and Coatings.
Chairman of Northeast Section, Forest Products Research Society.
Wood Committee, Building Research Institute.
Massachusetts Committee, New England Building Code Association.
New England Educational Committee, Building Officials Code Association.

Greeley, Frederick
Time and Place Committee, Northeast Section, Wildlife Society.

Hoadley, R. Bruce
Treasurer, Northeast Section, Forest Products Research Society.
Treasurer and Acting Secretary, Massachusetts Chapter, Sigma Xi.

Larson, Joseph S.
Resolutions and Public Statements Committee, Northeast Section, Wildlife Society.

Mawson, Joseph C.
Secretary-Treasurer, Yankee Chapter, New England Section, Society of American Foresters.

Noyes, John H.
Committee on World Forestry, and General Chairman, Golden Anniversary Meeting, New England Section, Society of American Foresters.

Reed, Roger J.
Program Committee and Nominating Committee, Southern New England Chapter, American Fisheries Society.

Rhodes, Arnold D.
Massachusetts Board of Natural Resources.
Chairman, Northeast Section, Association of State College and University Forestry Research Organizations.

Rice, William W.
Secretary, Drying Division, Forest Products Research Society.
Executive Secretary and Treasurer, New England Kiln Drying Association.

Department of Hotel and Restaurant Administration

Conrade, George R.
Public Relations Secretary, Management Information Task Force, American Hotel and Motel Association.
Credit Card Subcommittee, American Hotel-Motel Association to the American National Standards Institute Committee on Credit Cards.
Council on Hotel, Restaurant and Institutional Education.

Eshbach, Charles E.
Vice President, Western Massachusetts Branch, Food Service Executives Association.
Research Committee, Council on Hotel, Restaurant and Institutional Education.
Secretary, Massachusetts Food Service Educational Council.
Public Relations Committee and Program Committee, Society for the Advancement of Food Service Research.

Lundberg, Donald E.
Advisory Board, Massachusetts Hospital Food Service Directors Association.

Robertson, Clifford J.
Elected Councilor, Connecticut Section, Institute of Food Technologists.
Chairman, Council Committee on Regional Sections and Affiliated Organizations, Institute of Food Technologists.
Moderator of "Food Update"; General Chairman, "Sections East"; Chairman, Subcommittee of "Dairy and Poultry Products" of the Committee on Stable, Compact Foods, Research and Development Associates, U. S. Army, Natick Laboratories.
Chairman, Subcommittee on "Industry Action," Committee on Food and Nutrition, American Health Foundation.
Chairman, Nominating Committee, and Member, Program Committee, Food Service Division, Institute of Food Technologists.

Department of Landscape Architecture

Cudnohufsky, Walter
"Task Force '70" Committee, American Society of Landscape Architecture.

Dines, Nicholas T.
Education Committee, Boston Society of Landscape Architects.

Kent, Robert L., Jr.
Student Affiliation Committee, American Society of Landscape Architects.

King, Gordon S.
Tree Evaluation Committee and Policy Committee, International Shade Tree Conference.
Secretary-Treasurer, Western Massachusetts Shade Tree Association.
Chairman, Educational Committee, Massachusetts Tree Wardens' and Foresters' Association.
Advisor, Massachusetts Tree and Horticulture Council.
Chairman, Tree Wardens, Arborists and Utilities Conference.

Zube, Ervin H.
Executive Committee, Boston Society of Landscape Architects.

Department of Plant and Soil Sciences

Bramlage, William J.
Secretary-Treasurer, University of Massachusetts Chapter, Phi Tau Sigma.
Ad Hoc Committee for Post-Harvest Horticulture, American Society for Horticultural Science.

Colby, William G.
President, Northeastern Section, American Society of Agronomy.

Drake, Mack
Consulting Editor, Soil Science International Agronomy Committee A4121, American Society of Agronomy.
Chairman, Hokkaido International School Corporation, Sapporo, Japan.

Greene, Duane W.
New Agricultural Chemicals Committee, American Society for Horticultural Science.

Havis, John R.
President-Elect, Northeast Region, American Society for Horticultural Science.

Maynard, Donald N.
Governing Board, American Institute of Biological Sciences.
Board of Directors, Science Funding Policy Committee, American Society for Horticultural Science.

Michelson, Louis F.
Committee on Certification of Soil Scientists, American Society of Agronomy.

Southwick, Franklin W.
Secretary-Treasurer, Massachusetts Fruit Growers' Association, Inc.

Troll, Joseph
Secretary, Massachusetts Turf and Lawn Grass Council.
Green Section, U. S. Golf Association.

Vengris, Jonas
Chairman, Herbaceous Weeds Section, Research Coordinating Committee, Northeastern Weed Control Conference.
"Carrier Leaflet" Committee, Weed Science Society of America.

Weeks, Martin E.
Committee on Land Use in An Urban State, Northeast Regional Soil Survey.
Committee on Soil Organic Matter, Northeast Regional Soil Survey.

Zak, John M.
Cape Cod National Seashore Scientific Advisory Committee.

Department of Plant Pathology

Rohde, Richard A.
Secretary-Treasurer 1969 and Vice President 1970, Northeastern Division, American Phytopathological Society.
Education Committee, Society of Nematologists.

Shade Tree Laboratories

Holmes, Francis W.
American Phytopathological Society:
Chairman, Committee on Regulatory Work and Foreign Plant Diseases.
Convener, Committee on Phytopathological Translations.
Vice President, Western Massachusetts Tree Wardens' and Moth Superintendents' Association.
Member, Panel in Biology for Evaluation of Applicants for Post-Doctoral Fellowships in Federal Laboratories, National Academy of Sciences - National Research Council.

McKenzie, Malcolm A.
Northeastern Forest Pest Council.
Massachusetts Forest and Park Association:
Secretary, Committee -- 25th Annual Conference on Dutch Elm Disease.
Vice President for Hampshire County.
Advisory Council, TREES, "The Journal of American Arboriculture."
Consultant, Executive Committee, Massachusetts Tree Wardens' and Foresters' Association.
Honorary Member, Western Massachusetts Tree Wardens' and Moth Superintendents' Association.

Regulatory Services (Feed, Fertilizer, Dairy Law, and Seed Laboratory)

Kuzmeski, John W.
Association of Official Analytical Chemists.
Association of American Feed Control Officials.
Association of American Fertilizer Control Officials.

Morgan, Ralph M.
Association of American Feed Control Officials.
Association of American Fertilizer Control Officials.
American Microscopists Association.

Rice, William N.
Association of Official Seed Analysts:
Secretary-Treasurer.
Chairman, Meeting Place Committee.
Rules Committee.
Legislative Committee.
Association of Seed Control Officials of the Northeastern States:
Chairman, Noxious Weed Seed Committee.
Administrative Committee.
Administrative Committee, American Association of Seed Control Officials.

Eiben, Carl H.
Research Subcommittee, Association of Official Seed Analysts.

Department of Veterinary and Animal Sciences

Borton, Anthony
Horse Committee, American Society of Animal Science.
Horse Research Committee, Northeast Horse Extension Committee.

Colby, Byron E.
National Chairman, Extension Animal Science Committee, American Society of Animal Science.

Damon, Richard A., Jr.
Representative, Biological Science Information and Retrieval, American Society of Animal Science.
President, University of Massachusetts Chapter, Sigma Xi.

Gaunt, Stanley N.
Milk Composition Committee, American Dairy Science Association.

Mellen, William J.
Poultry Science Association:
U. S. Committee for the Tom Newman Memorial Award.
Chairman, Physiology Section, 1969 Annual Meeting.

Smith, Russell E.
Chairman, Committee on Prophylaxis and Therapeutics, National Leptospirosis Conference.
Committee on Leptospirosis, U. S. Animal Health Association.
Committee on Standard Nomenclature of Reproductive Diseases of Domestic Animals, National Animal Disease Laboratory.

Smyser, Charles F.
Antigen Committee, Northeastern Conference of Avian Diseases.
Pullorum-Typhoid Testing Committee, Northeastern Conference of Avian Diseases.

Snoeyenbos, Glenn H.
American Association of Avian Pathologists:
Secretary-Treasurer.
Board of Directors.
Salmonella Committee.
Business Manager - Avian Diseases.
Chairman, Antigen Committee, Permanent Secretary, Northeastern Conference on Avian Diseases.

Stern, Douglas N.
Director, American Association of Extension Veterinarians.
Massachusetts Veterinary Medical Association.
Secretary-Treasurer, Western Massachusetts Veterinary Medical Association.

Weinack, Mrs. Olga M.
Mycoplasmosis Committee, American Association of Avian Pathologists.
Chairman, Mycoplasma Committee, Northeastern Conference on Avian Diseases.

E. RESEARCH PROJECTS

Department of Agricultural and Food Economics

Bragg, John H.
Design and Evaluation of a Ghetto Food Store Managerial Training Program.
The Impact of the Board of Directors on the Success or Failure of Farm Cooperatives.

Brown, Alfred A.
The Efficiency of Alternative Railroad Costing Methods as a Basis of Rate Determination.

Callahan, James W.
An Analysis of Municipal Expenditures and Revenue Sources in Massachusetts Communities.

Christensen, Robert L.
An Analysis of High Yielding Rice Farms in Korea.
Selected Interrelationships Between Poultry Marketing and Other Sectors of the Economy. (With Alfred A. Brown)
Impact of Insurance Companies on Rural Communities and Families.

Crossmon, Bradford D.
Northeast Regional Farm Labor Study.

Engel, N. Eugene
Spatial Analysis of the Korean Rice Economy.
An Input-Output Analysis of Sectors of the Massachusetts Economy.

Foster, John H.
An Economic Analysis of the Gambia Peanut Oil Marketing Board.
Analysis of Effectiveness of Public Programs to Increase Rice Production.
Private Outdoor Recreation Operations and Public Policy in the Connecticut Valley Region of Massachusetts.
Complete Cost-Benefit Analysis for Public Decision Making.

Fuller, Earl I.
The Competitive Position of Massachusetts Agriculture: Its Preservation and Improvement.

Jarvesoo, Elmar
Livestock Production in the U.S.S.R.
Analysis of Labor Utilization on Eight Dahomey Farms.
Flower Delivery Economics.

Leed, Theodore W.
Development of the Wholesome Meat Act of 1967 and Its Implications for Meat Inspection and Distribution in the States.
Grocery Warehouse Damage in New England.
Price Elasticity of Demand for One Percent Fluid Milk in Retail Food Stores.
Statistical Analysis of New Equipment for Butterfat and Other Component Testing of Milk.

Marion, Donald R.
Cost of Food Distribution in Low-Income Areas.
Economics of Unit Pricing in Retail Food Stores. (With Theodore W. Leed)

Russell, Sargent
Farm Management of African Semi-Commercial Farms.
Impacts of Regulations Affecting Competition, Industry Organization and Practice on the Performance of the Fluid Milk Industry.

Storey, David A.
Cost and Price Consideration in Apple Storage With Special Reference to the Taigue Korea Situation.
An Analysis of Factors Affecting the Demand for Pork in Taiwan.
Economic Analysis of the Market Structure of the Commercial Fishing Industry in the Northeast.

Vertrees, Robert L.
Economic Impact of Water Pollution Laws in Michigan.

Wyckoff, Jean B.
Impact of Urban Growth on the Rural Countryside.
Economic Analysis of Coordinated Watershed Planning.

Department of Agricultural Engineering

Clayton, Joe T.
Closed Systems for Animal Sewage Treatment.
Physiological Responses of Chickens to Varying Environments.

Johnson, Ernest A.
Control of Pests on Perishable Food Commodities in Marketing Channels. (With Joe T. Clayton)

Rha, Mrs. Chokyum
Investigation of Thermal and Rheological Properties of Proteinaceous Materials.
Investigation of Methods for Determining Yield Stress of Organic Materials.

Whitney, Lester F.
Improvement of Efficiency in Harvesting Apples.
Mechanical and Physical Properties of Forage as Related to Processing, Preservation and Utilization.
Mechanical Injury to Processed Fruits and Vegetables During Handling.

Zahradnik, John W.
Heat and Mass Transfer Studies in Food Engineering.
Shellfish Mariculture Demonstration Pilot Plant.

Cranberry Station

Cross, Chester E., Irving E. Demoranville, Robert M. Devlin, and Bert M. Zuckerman
Evaluation of Herbicides and Fungicides for Cranberries.

Devlin, Robert M.
The Effect of Natural and Artificial Plant Growth Regulators on Fruit Set and Berry Size in Vaccinium Macrocarpon (Variety Early Black).

_____ and Chester E. Cross
The Ecology of Selected Submersed Aquatic Weeds.

Deubert, Karl H.
Translocation of Pesticides from Cranberry Bogs to Their Surroundings.
The Chemistry of Cranberry Bog Soils.

Norton, John S. and Chester E. Cross
The Mechanization of Cultural, Harvesting and Market Preparation Operations in Cranberries.

Rohde, Richard A. and Bert M. Zuckerman
Biology of the Plant - Parasitic Nematode, Pratylenchus penetrans.

Tomlinson, William E., Jr.
Insects Affecting Cranberries, Blueberries and Other Eracaceous Plants.

Department of Entomology

Becker, William B. and Walter M. Banfield (Plant Pathology)
Etiology of Maple Tree Decline in Massachusetts.

Edwards, Lawrence J.
Tricarboxylic Acid Cycle Intermediates in Normal and Anethetized Insects.
Host Selection and Feeding Responses of Insects.

Peters, T. Michael
Biological and Biochemical Factors Influencing the Development of Larval Mosquito Populations.

Shaw, Frank R.
Pesticide Residues In or On Raw Agricultural Commodities.
The Role of Parasites and Predators in the Control of the Alfalfa Weevil.

Stoffolano, John G., Jr.
Associations Between the Plant Pathogen, Pseudomonas melophthoro Allen and Riker, and Rhagoletis pomonella Walsh.

Department of Environmental Sciences (Amherst)

Gunner, Haim B.
Microbial Degradation of Organic Effluents of Industrial Origin.
Biological Degradation of Agricultural Pesticides.
Factors Affecting the Accumulation of Nitrates in Soils, Water and Plants.

Litsky, Warren
Bacterial Shedding.
Fluorescent Antibody Methods for Determination of Fecal Streptococci.
Airborne Bacteria.
Microbial Intervention in the Eutrophication Process.

Mueller, William S.
Slime Infestations in the Connecticut River.
Bactericidal Agents for Cutting and Grinding Fluids.

Walker, Robert W.
Investigations of Fatty Acids from Neutral Lipid and Phosphatide Fractions of Atypical Mycobacteria.

Department of Environmental Sciences (Waltham)

Campbell, Franklin J.
Investigations of Different Commercial Formulations, Media Type and Growth Regulators for Lily, Pot Mums, and Bedding Plants.
Carnation Breeding for the Production of Promising New Commercially-Valuable Clones.
Environmental Adaptability Evaluations of Pre-Introductory Breeders Trials of Bedding Plants.

Feder, William A.
Air Pollution Problems in the Northeast.

Galinat, Walton C.
The Cytogenetics, Morphology and Evolution of Corn and Its Relatives.

Galinat, Walton C. and William H. Lachman (Plant and Soil Sciences)
Genetics and Physiology of Sweet Corn Quality and Biological Efficiency.

Manning, William J.
Control of Root Rot Diseases of Greenhouse Floricultural and Vegetable Crops.

McEnroe, William D.
American Dog Tick, Comparative Toxicology and Behavior.

_____ and John A. Naegele
Biological and Chemical Studies of Mite Resistance to Chemicals.

Naegele, John A.
Lake Cochituate Watershed Association As a Factor in Local Government.

Department of Food Science and Technology

Buck, Ernest M.
Effect of State of Contraction on Shear Strength and Actomyosin Formation in Rabbit Muscle.

Fagerson, Irving S.
Minor Components in Grain Spirits.
Composition of Corn Hydrolysates.
Role of Volatile Organic Compounds as Food Flavor Components.

Francis, Frederick J., Fergus M. Clydesdale, and William B. Esselen
Quality Maintenance, Measurement, and Control in the Marketing of Vegetables, Including Potatoes.

Hankinson, Denzel J. and Stanley N. Gaunt (Veterinary and Animal Sciences)
Methods of Standardizing the Dye Binding Method for Measuring Protein in Milk.

Hayes, Kirby M.
Spinning of Edible Protein Fibers and Incorporation and Evaluation of Flavors in the Fibers.

Hultin, Herbert O.
Enzymatic Control of Quality Factors in Edible Plant and Animal Materials.

Levin, Robert E.
Fisheries Sanitation-Improving Product Quality and Shelf-Life of Massachusetts Commercial Fishery Products.
Phage Typing of Psychrophiles.
Studies on the Deoxyribonuclease Produced by Pseudomonas putrefaciens.
Characterization of Trimethylamine Reductase from Pseudomonas putrefaciens.

Nawar, Wassef W.
Health Significance of Radiolytic Products.
Effect of Thermal Processing on the Chemical Composition of Foods.

Sawyer, F. Miles
Effect of 5'-Ribonucleotides on Irradiation Induced Off-Flavor in Ground Beef.
Effect of Low Temperatures on Quality and Marketability of Food Products.

Stumbo, Charles R.
Sterilization and Inhibitors in Food Processing.

Department of Forestry and Wildlife Management

Abbott, Herschel G.
Direct Seeding, and the Influence of Birds and Mammals on Forest Regeneration in the Northeast.

Bond, Robert S.
Structure of the Pallet Manufacturing Industry in the Northeast.
Problem Analysis of the Labor Situation in the Primary Wood Processing Industries of the Northeast.
Consumer Analysis for Specific Forest-Oriented Recreational Activities in the Northeast.

Carlozzi, Carl A.
Programmed Selection of Optimum Uses of a Small Water Resource Subjected to Complex Simultaneous Demand Stresses.
Enhancement of Ecologic and Aesthetic Values of Wetlands Associated With Interstate Highways.
Optimal Application of University Resources to Assist Public Agencies on Water Problems.

Cole, Charles F.
Pesticide Effects on Larval Marine Fishes.

Gatslick, Harold B.
Market Potential in Massachusetts for Industrial Plywood of Northeastern Species.
Wood Properties of Red Pine.

Greeley, Frederick
Effects of Dietary Protein Levels on the Growth Rate of Wood Ducks.
The Control of Bird Depredation.

_____ and Joseph S. Larson
Food and Shelter Requirements of the Ruffed Grouse in Relation to Energy Regimes.

Hoadley, R. Bruce
Investigation of Nails and Related Wood Fasteners.
Rheology of Wood Restrained from Swelling.

Larson, Joseph S.
Social and Developmental Behavior of Beaver, Castor canadensis.
Hair Root Sex Chromatin in Sex Determination of Certain Mammals.
A Multi-Variate Model for Public Management of Fresh Water Wetlands.

MacConnell, William P.
Use of Aerial Photographs to Evaluate the Recreational Resources of a River.

_____ and Donald L. Mader
Resistance of Eight Christmas Tree Species to Simazine and Atrazine.
Management of Christmas Trees on Power Line Rights of Way.

Mader, Donald L.
Genetic and Environmental Adaptability of Forest Trees.
Evapo-transpiration, Run-Off, Storage, and Drainage Characteristics of Water from Forest Soils.

McCann, James A.
Evaluation of a Method for Characterizing the Ponded Waters of Massachusetts.
An Inventory of the Ponds, Lakes, and Reservoirs of Massachusetts.
The Effects of the Holyoke Dam Fish Passage Facilities on the Mortality and Behavior of the American Shad.

Reed, Roger J.
Juvenile American Shad in the Connecticut River, Massachusetts.
The Fishery Potential of Four Aquatic Environments Created by Interstate Highway Construction in Massachusetts.
A Biological Investigation of the Effects of Pollution on the Aquatic Environment and Organism in the Millers River Watershed, Franklin and Worcester Counties, Massachusetts.

Rhodes, Arnold D.
Effect of Thinning and Harvest Cuttings on the Development of Forest Stands in Massachusetts.

Sheldon, William G.
Food and Environmental Conditions As a Limiting Factor for the Black Duck, Anas rubripes, in Nauset Marsh, Orleans and Eastham, Massachusetts.
Bobcat Behavior in a Peninsular Habitat.
Productivity and Breeding Behavior of Canada Geese at Marshy Point, Manitoba.

Wetherbee, David K.
Ecology of Avian Sterility.
Role of Tradition in Territoriality of Sparrow Hawks.

Wilson, Brayton F.
Maple Tree Root Initiation, Development and Geotropic Response.
The Role of Mechanical Stress in Cambial Activity of Trees.
Differentiation of Root Types and Their Geotropic Response During Tree Root System Development.

Department of Hotel and Restaurant Administration

Conrade, George R.
Management Information System for University Campus Center.
Computer-Assisted Kitchen Layout.

_____ and Warren T. Grinnan
Computer-Using Systems for Service Areas of New Campus Center.

Cournoyer, Norman G.
Factors Influencing Guests to Stay in Hotels and Motels in Pioneer Valley Area of Massachusetts.
Sales or Occupancy Potential for Hotels and Motels As Indication of Efficiency.

Wrisley, Albert J., Jr.
Computerized Planning and Control System for Food Service Operations.

Department of Landscape Architecture

Fabos, Julius
Landscape Design Criteria for Highway Wetlands and Impoundments.

King,Gordon S.
The Use of Polyurethane for Repairing Damaged Trees.

Martin, John H.
Evaluation of Public Policy Alternatives in Maximizing Public Benefits Arising from Water Quality Improvement.

Zube, Ervin H.
Viewer Preferences of Landscape Displays.

Department of Plant and Soil Sciences

Baker, John H.
Factors Controlling the Chemical Composition of the Soil Solution.

Bramlage, William J.
Post-Harvest Physiology of Pomological Fruits; Handling, Storage, and Post-Storage Problems in the Marketing Channels.

Drake, Mack and William G. Colby
Morphological and Physiological Responses of Perennial Forage Grasses.

Havis, John R.
Physiology of Low Temperature Injury on Ornamental Plants.

Jennings, Paul H.
Comparisons of the Amylases in Maize During Seed Germination and Photosynthetic Tissue.

Lachman, William H.
Genetics and Breeding of Tomatoes.

_____ and Walton C. Galinat (Environmental Sciences)
Genetics and Physiology of Sweet Corn Quality and Biological Efficiency.

Marsh, Herbert V.
Effects of Certain Pesticides and Plant-Growth Regulators on Plant Metabolism.

Maynard, Donald N.
The Relationship of Nutrition to Plant Physiological Disorders.

_____ and Allen V. Barker
Plant and Nutritional Variables Associated With Ammonium Assimilation in Plants.

Southwick, Franklin W.
Relationships of Mineral Nutrition to Physiological Disorders of Apples.

Stewart, Gordon L.
An Examination of Potential Tracers to Depict the Movement and Behavior of Water in Soils.

Thomson, Cecil L.
Pickling Cucumber Research.

Troll, Joseph
The Effect of KNO_3 on the Growth of Creeping Bentgrass, Agrostic palustris.

Vengris, Jonas
Weed Life Cycles As Related to Weed Control in the Northeast.
Field Trials in Development of Up-to-Date Grassy Weed Control Methods in Field Corn.

Zak, John M., John R. Havis, Joseph Troll, and Hrant M. Yegian
Roadside Development Project.

Department of Plant Pathology

Agrios, George N.
Transmission and Physiological Effects of Certain Pome Fruit Viruses.
Viruses and Virus Diseases of Forest Hardwoods.

Banfield, Walter M.
Lophodermium Needle Cast Disease and Ozone Damage on White Pines.
The Role of Fruit Flies in the Transmission of Bacterial Soft Rot.

_____ and William B. Becker (Entomology)
Etiology of Maple Tree Decline in Massachusetts.

Mount, Mark S.
The Ecology of the Leaf Surface.

Rohde, Richard A. and Bert M. Zuckerman (Cranberry Station)
Biology of the Plant-Parasitic Nematode, Pratylenchus penetrans.

Shade Tree Laboratories

Holmes, Francis W.
Pathology of Wilt Diseases of Trees.

McKenzie, Malcolm A.
Study of Fungus and Insect Pests of Trees in Massachusetts.

Regulatory Services (Feed, Fertilizer, Dairy Law, and Seed Laboratory)

Eiben, Carl H., Waldo C. Lincoln, Jr. and William N. Rice
Purity and Germination of Lawn Grass Seed.

Kuzmeski, John W.
Pesticide Residues In or On Raw Agricultural Products.

Department of Veterinary and Animal Sciences

Anderson, Donald L.
Endocrine Physiology Associated With Nutritional-Environmental Interactions in Fowl.
Interrelations of Intensity and Duration of Light and Nutrient Intake on the Reproductive Performance of Female Chickens Maintained in a Thermally Controlled Environment.

Black, Donald L. and George R. Howe
Mammalian Reproduction.
Endocrine Factors Affecting Reproduction in Cattle.

Borton, Anthony
Equine Growth Studies.
Control of Ovulation in the Mare.

Fenner, Heinrich
The Interaction of the Acid Base Pool and the Function of Saliva in the Digestion Processes in the Rumen.

Gaunt, Stanley N. and Denzel J. Hankinson
Relationships Between Genetic Markers and Performance in Dairy Cattle.

Howe, George R.
Hyperbaric Effects of High Pressure Exposure on Endocrine Physiology.

Mellen, William J. and A. James Farrington, III
Physiological Bases of Inherited Differences in Growth Rate.

Sevoian, Martin
Avian Lymphomatosis.

Smith, Russell E. and Iona M. Reynolds
Infectious Diseases Affecting Reproduction in Cattle.

Smyth, J. Robert, Jr. and Thomas W. Fox
Genetic Bases for Resistance to the Avian Leukosis Complex.

Snoeyenbos, Glenn H.
Salmonellosis of Poultry.

Weinack, Mrs. Olga M. and Glenn H. Snoeyenbos
Respiratory Diseases of Poultry.

F. COOPERATIVE PROGRAMS WITH OTHER SCHOOLS AND COLLEGES WITHIN AND WITHOUT THE UNIVERSITY

Department of Agricultural and Food Economics

Bragg, John H.
Workshops for dairy processing and distribution firms' executives on "Capital Budgeting" with faculty from Cornell, Rutgers, Vermont, Pennsylvania, and Ohio State Universities.

Engel, N. Eugene
With Westfield Public School System in series "Greater Springfield Ecology Workshops."

Foster, John H.
With Department of Anthropology, Seminar in Cultural Dynamics and Applied Anthropology.

Jarvesoo, Elmar
With Soviet and East European Studies Program in teaching inter-departmental course on Soviet Perspectives.

Vertrees, Robert L.
With Civil Engineering Program, teaching course in water quality.

Wyckoff, Jean B.
With School of Physical Education, seminar lecture on Problems of Human Movement; and with School of Engineering, lecture course on Water Institutions and Policy. Also, with eight state universities and Extension Service on six-leaflet series "Agricultural Trade Policies: What Are the Choices?"

Department of Agricultural Engineering

Light, Robert G.
With five other New England State Universities, in interest of co-operative Extension programs.

Zahradnik, John W.
With College of Arts and Sciences and School of Engineering in Marine Science Program; and with School of Engineering in Ocean Engineering Program.

With New England Marine Resources Information Program, as alternate planning board and Extension committee member.

Cranberry Station

Experimental Biology Laboratory
With Department of Biochemistry, Technion, Haifa, and Department of Ultrastructure, Weizmann Institute, Rehovot, in research on ultrastructural changes in Caenorhabditis briggsae (a nematode) during aging.

Department of Environmental Sciences (Amherst)

Litsky, Warren
With Department of Public Health, teaching of Public Health Laboratory I and II.

Department of Environmental Sciences (Waltham)

Galinat, Walton C.
With Bussey Institute of Harvard University, Oswego State College, and University at Boston, on corn (maize) research and lectures.

Department of Food Science and Technology

Sawyer, F. Miles
Cooperative research in support of M.S. graduate student in Civil Engineering.

Department of Forestry and Wildlife Management

Bond, Robert S., Frederick Greeley, and Donald L. Mader
With other New England State Universities, three regional research projects.

Carlozzi, Carl A.
With Five Colleges, Seminar on Environmental Quality and Housing.

Cole, Charles F.
With University Marine Science Program, interdisciplinary program; and arranged week's cruise at sea off North Carolina coast for students and faculty of Fisheries, Zoology and Engineering.

Department of Hotel and Restaurant Administration

Cournoyer, Norman G.
With Director of Food Service, Vermont State Hospital, Waterbury, Vermont, in using computer to effect controls at hospital and other locations.

Robertson, Clifford J.
With Harvard University, Department of Nutrition, cooperated in providing information on industry practices, and planning and conduct of study program on quasi-dairy products.

Department of Landscape Architecture

Fabos, Julius
With Departments of Government, Industrial Engineering, Forestry and Wildlife Management, and Agricultural and Food Economics, interdisciplinary regional planning course.

Department of Plant and Soil Sciences

Colby, William G.
With Department of Plant Pathology, University of Rhode Island, cooperative field experiment on carbohydrate reserves in putting green grasses.

Goddard, George B.
With the Plants In An Urban Environment Institute, Michigan State University, lecture series.

Marsh, Herbert V., Jr.
With Botany Department, teaching courses in plant growth regulators and plant metabolism.

Vengris, Jonas
With Department of Botany, University of New Hampshire, regional research and preparation of bulletin on Portulaca oleracea life cycle studies.

Stewart, Gordon L.
With Water Resources Division, U. S. Department of Interior, assisted in several of their research programs.

Department of Plant Pathology

Gilgut, Constantine J.
With Universities of Connecticut and Rhode Island, disease control recommendations for fruit, potatoes, and tobacco prepared cooperatively.

Shade Tree Laboratories

With U. S. Forest Service, joint study of roots of sugar maples planted nine years ago at various depths in soil of two types for starch and reduction in sugar content.

Department of Veterinary and Animal Sciences

Black, Donald L.
With Departments of Zoology and Biochemistry, a graduate traineeship in mammalian reproduction in field of physiology of reproduction.

Sevoian, Martin
With Animal Medical Center, New York City, cooperative program in comparative leukemias.

VIII. SPECIAL PROGRAMS

A. CENTER FOR INTERNATIONAL AGRICULTURAL STUDIES

Under terms of the University contract with the United States Agency for International Development, the Center participates in the agricultural development of Malawi in the following ways:

1. UMass/AID/Malawi Project (AID/347)

Four students from Malawi received B.S. degrees during the year. They were the last of a group of nine enrolled as part of the University-Malawi-AID Program. All will return to their native land for teaching and professional assignments. The four graduates were Edward Malenga, Khindon Masangano, Vincent Saka, and Martin S. Mughogho.

Bunda Agricultural College

A second phase of this project is the furnishing of agricultural faculty from the University to Bunda College. Three such faculty presently at Bunda are: Francis G. Mentzer, Jr., lecturer in Extension and Chief-of-Party; Joseph A. Keohane, lecturer in agricultural biology; and John Smagula, lecturer in agricultural chemistry.

Bunda College offered its first four-year degree program in agriculture in September 1969, in addition to continuing its curricula at the diploma (three-year) level, and upgrading courses for selected employees of the Ministry of Agriculture. A total of seven agricultural faculty have served at the fledgling college since its inception.

Special Assistance Projects

The Malawi Government requested special assistance and consultation service from the College of Agriculture faculty during the year. These requests involving short-term visits of staff to Malawi included:

Dr. Haim B. Gunner, Department of Environmental Sciences, and Associate Director of Research for the Center, who was asked by the Malawi Ministry of Agriculture to suggest possible solutions to microbiological problems affecting agricultural production, and to assist in the development of a Soils Microbiology Department at Bunda College.

Dr. Mack Drake, Department of Plant and Soil Sciences, who conducted seminars in plant nutrition at Bunda College and also demonstrations in tissue for plant nutrients.

Dr. Walton C. Gregory, Department of Crop Science, North Carolina State University, who served as a consultant to the Malawi Ministry of Agriculture on peanut production.

This UMass/AID/Malawi contract expires November 30, 1970. Officials at Bunda College, University of Malawi, have initiated requests to the AID Mission in Malawi and to the U. S. Ambassador to Malawi for a continuation of this University support in the development of Bunda College.

AID presently is exploring the possibility of establishing a Regional Training Center at Bunda College. If this materializes, the College of Agriculture here will furnish two to four of its faculty for three-months' training assignments. Trainees at the Regional Center would be selected from Malawi, Zambia, Botswana, Swaziland, and Lesotho.

2. Regional Center for Applied Research and Technology, Malawi

The University has awarded the Center for International Agricultural Studies a grant of $10,000 to be used in the development of a proposal for an agricultural research and technology center and the generation of the financial support it will require.

The center would be located preferably at Bunda Agricultural College. Developmental efforts to date by the Center staff, the Government of Malawi, the Agency for International Development (AID) and other sources have resulted in the following progress:

The inclusion in the 1970-71 Congressional Appropriation a request from AID of $50,000 for a feasibility study of the proposal; the interest of the Directors of the International Development Research Center being established by the Canadian Government, and future submission of the UMass proposal to the Directors as a possible project. The Malawi Ambassador to the United States, some members of Congress, and the Food and Agriculture Organization in Rome, Italy, also have shown interest in the proposed center and contributed assistance.

3. International Training Program (AID/399)

This program has three functions:

a. To train on a short-term basis participants with supervisory positions in the ministries of agriculture and education in their respective countries. Currently undergoing training in agricultural education and agronomy for one year are Emmanuel Adegbenjo, Nigeria; and Abdul Mannan, East Pakistan. This summer the two are training at the Bristol County Agricultural High School, and at the Bristol and Middlesex County Extension Services.

b. To administer the graduate training, in various departments of the College, of degree personnel from ministries of agriculture and foreign research institutes. Three students from Korea completed their Master's Degree studies in agricultural economics this June. Four others will complete work this fall and winter.

c. To develop special programs for professional visitors from foreign countries who come here to consult with faculty members or administrators in the College of Agriculture. Such programs were developed for the following:

Drs. Libal Gorner and Zalud, food chemists from Czechoslovakia, sponsored by the Food and Agriculture Organization, Rome, Italy. They were the first Czechoslovakian scientists to be invited to the United States since the Union of Soviet Socialist Republics occupation of their homeland in August 1968.

Dr. Govert C. van Drimmelen, Agricultural Counselor at the Embassy of South Africa, visited with our Department of Veterinary and Animal Sciences and research personnel. An internationally known microbiologist, he also visited the campus in 1968.

Thirty-eight farmers from the Province of Quebec, Canada, were visitors and a three-day program was arranged for them on the campus and in Worcester County.

4. Peace Corps Intern Program

This is the second year the Center has recruited and partially trained Peace Corps Volunteers. This year the group of 20 students will go primarily to Peace Corps positions in Botswana, Swaziland, and Ethiopia in Africa. These are all professional positions and the students have been recruited for specific jobs based on their training at the University. Jobs include fisheries and entomology research, national agricultural planning and ranch management, teaching biology and horticulture, a tobacco Extension job, and five jobs as assistant game wardens.

As part of the development of this program, Center Director, Dr. John H. Foster, traveled to Kenya, Malawi, Botswana, and Swaziland in January 1970. He talked to last year's interns now in the two first mentioned countries to evaluate last year's program.

B. CIVIL DEFENSE TRAINING PROGRAM

Thirteen 32-hour courses in various Civil Defense specialties were conducted throughout the state as one week (five consecutive days) or as evening courses. Types of courses and number of students in attendance were as noted below:

	Number of Courses	Certified Attendance*
Shelter Management Instructor (SMI)	1	14
Radiological Monitor Instructor (RMI)	5	81
Radiological Defense Officer (RDO)	2	42
Civil Defense Management (CDM)	3	73
Plans and Operations (P & O)	2	25
TOTALS	13	235

*Received Certificates of Completion .

Since 1967 the Civil Defense Program has conducted Emergency Operations Simulation (EOS) training in cities and towns of the Commonwealth. The purpose of OES is to demonstrate to a local community an operations procedure and physical display that can be used effectively for any type of major emergency--natural or man-made. A study of a city's personnel and equipment that can be brought to bear in an emergency is first made. With this information and the cooperation of local department heads and others, an emergency situation is evolved for the town that is realistic and requires the officials to make decisions and coordinate actions. Emergency Operations Simulation training programs were conducted as follows:

Location	Attendance
Cambridge	35
Lowell	30
Quincy	39
Malden	24
Greenfield	31
TOTAL	159

Two 1-day conferences for elected officials and industry were conducted in Medford and Framingham with 26 persons in attendance at each location.

The Civil Defense Training Program is now being funded in nine-months' contract periods. This action was deemed necessary by the Office of Civil Defense to continue university training in the states within an austere budget. Funds for Fiscal 1970 totaled $71,885.

C. MISCELLANEOUS

A sum of $28,223 was granted by the National Science Foundation to the University of Massachusetts for a Cooperative College-School Science Program in Greenhouse Management for High School Biology Teachers in the Department of Plant and Soil Sciences under the direction of Dr. George B. Goddard. Approximately 20 teachers were involved in this five-week program.

Dr. Joseph Troll, Department of Plant and Soil Sciences, served as coordinator and administrator of the annual eight-week Winter School for Turf Managers in which about 25 persons enrolled from many areas East of the Mississippi River.

The Department of Landscape Architecture participated in the second year of a limited staff exchange with the Civil Works Division, U. S. Army Corps of Engineers; and a fourth student exchange with Hampton Institute, Hampton, Virginia (Negro).

An Institute for the Study of Water Pollution Control was conducted for Junior and Senior High School Science Teachers by the Institute of Agricultural and Industrial Microbiology in cooperation with the School of Education. The first four weeks of the six-weeks' course was spent in

classroom study and the last two in a field study of the Connecticut River and its tributaries from Vermont to Connecticut. The study involved not only the biological, chemical and engineering aspects of pollution but also political and economic aspects. Drs. Warren Litsky and Laverne J. Thelen directed the Institute attended by 21 science teachers.

Sponsorship of the 30th Annual Eastern Conference of the National Pest Control Association by the Department of Entomology at which over 140 technical experts learned of recent research findings pertinent to their industry.

IX. CONTROL PROGRAMS

A. PULLORUM DISEASE ERADICATION

In the 1968-69 testing season, 247 chicken, turkey, and game bird flocks were tested representing 375,955 samples. No pullorum or fowl typhoid infection was found among the commercial breeding flocks tested. Pullorum infection was detected in two fancier flocks and eliminated by retesting.

Paratyphoid infection was detected in seven chicken flocks tested for pullorum disease. Salmonella typhimurium was isolated from three flocks, Salmonella enteritidis from two flocks, Salmonella Heidelberg and Salmonella muenchen from one flock each.

B. MYCOPLASMA GALLISEPTICUM TESTING

A total of 442,172 tests for Mycoplasma gallisepticum was conducted during the 1968-69 testing season. Forty-nine chicken breeder flocks, 301,690 adult birds, were tested in toto and were found free of Mycoplasma gallisepticum. The majority of these flocks originated from seven different strains of egg or meat birds. Thirty-five of these flocks were monitored on a five percent basis one or more times at 30-90 day intervals and no Mycoplasma gallisepticum reactors were detected in 52,595 birds tested. Five turkey flocks (4,716 birds) and four pheasant flocks (7,680 birds) were the total tested and found free of Mycoplasma gallisepticum. A total of 75,491 random tests was conducted on day-old-chicks, growing birds, and mature chickens of which 8,070 were positive.

C. MASTITIS TESTING

The major emphasis of the Mastitis Laboratory is directed toward the eradication of Streptococcus agalactiae mastitis. Enrolled herds are intensively retested until declared free of this infection. Thereafter, these herds are retested semi-annually to monitor their status. A secondary emphasis is placed on culturing milk samples from problem cows to identify the mastitis pathogens present.

During 1969, 41 herds were initially tested, 27 of which were found to contain Streptococcus agalactiae positive cows (66%).

A total of 20 herds containing 1,180 cattle was declared free of this disease during the year. The mean herd size was 59 cows and an average of 14.7 head were initially found infected (25%).

Semi-annual testing in 301 herds showed that 16 had become reinfected (5.3%). In the majority of these cases infected replacement animals had not been tested prior to entering the milking line.

Diagnostic testing was performed in 139 herds involving 949 head at the request of veterinary practitioners, local health boards, or dairymen.

Although Streptococcus agalactiae remained the most common pathogen isolated, streptococci other than Streptococcus agalactiae, staphylococci, coliforms, Nocardia, C. pyogenes, and yeasts were problem organisms.

Testing totals included 1,125 herds, 34,297 cattle, and 140,073 milk samples.

D. REGULATORY SERVICES (FEED, FERTILIZER, DAIRY LAWS, AND SEED LABORATORY)

Activity includes the investigation of the quality of feeds, fertilizers, and seeds sold in the state; toxicological tests on viscera of animals suspected of being poisoned; tests for pesticide residues on animal and plant tissues, soil and milk tests; germination and identification of seeds; and analytical services performed for other college departments in connection with research.

The Seed Laboratory tested 2,174 samples of seed during the year of which 964 were official samples and 1,210 service and research samples. Staff members, also, assisted in promulgating new amendments to the Massachusetts Seed Act, and cooperated with professional society research and referee projects in seed testing.

Dr. William N. Rice taught a three-credit course in plant pathology, other staff taught 121 students (a unit in seed technology involving six lecture and demonstrations), and a three-day short course was given for market inspectors to help upgrade the Seed Inspection Program.

E. SHADE TREE LABORATORIES

A second year computer program again was used to produce the annual report on tree diagnoses other than Dutch elm disease. More than 14,000 diagnoses were summarized. Progress was noted in tree disease control with a planting of 280 trees of 70 different species at the shade tree experimental nursery, Horticultural Research Center, Belchertown, Massachusetts. Research stock in nurseries at Amherst and Belchertown now totals 11,000 trees.

The Shade Tree Laboratories do not conduct routine testing services as all studies are research-oriented. Outreach to the general public and industry is typified by the applied research programs with 351 cities and towns in the Commonwealth, state departments, and public tree officials on both municipal and state levels. These individuals and agencies seek scientific conference and counsel from Laboratory scientists. Related requests, other than Dutch elm disease, and studies totaled 1,569 in 1969.

F. DIAGNOSTIC LABORATORIES

The College of Agriculture provides veterinary diagnostic services at Waltham through the Department of Environmental Sciences, and at Amherst through the Department of Veterinary and Animal Sciences. Most of the poultry diagnostic work is performed by the Department of Environmental Sciences at Waltham. Poultry and large animal diagnostic services, as

well as Control Programs are conducted by the Department of Veterinary and Animal Sciences at Amherst. A detailed report of diagnostic and control work is available upon request.

Summary

1. Diagnostic

During the calendar year January 1, 1969 through December 31, 1969, a total of 6,630 avian and mammalian specimens in 1,146 consignments was submitted for laboratory examination. Specimens submitted were as follows:

Avian	Amherst	Waltham
Chicken	1,592	3,788
Turkey	56	187
Pheasant	1	59
Duck	11	32
Pigeon	-	48
Miscellaneous (13 species)	20	68
	1,680	4,182
Mammalian		
Cattle	295	
Sheep	18	
Swine	165	
Goats	4	
Horses	91	
Dogs	125	
Cats	10	
Miscellaneous (11 species)	46	14
	754	14
TOTALS	2,434	4,196

2. Control Services (Samples Tested)

Pullorum Disease	375,995	
Mastitis Control Service	140,073	
Mycoplasma gallisepticum Testing	442,172	2,703
TOTALS	958,240	2,703

X. MAJOR ACCOMPLISHMENTS

A. COURSE EVALUATION

The Student Course Evaluation Program initiated in September on a College-wide basis elicited a response of 65% of the teaching faculty who participated voluntarily. Ninety courses were evaluated by 2,500 students.

Computerized data provided each instructor with an analysis of his teaching performance along with comparisons on a department and College basis. The instructor then used this information on his teaching effectiveness to improve and strengthen his course offerings.

A committee of students, faculty, and administrators worked through Alpha Zeta, honorary agricultural fraternity; STOSO, Stockbridge Service Organization; and the College Educational Policies Committee to develop the program.

The student strike in May disrupted the planned spring evaluation but the evaluation will continue to be offered until such time as a University-wide program becomes effective.

B. STUDENT-FACULTY COMMITTEES

The College's 11 academic departments all have joint student-faculty committees ranging from curriculum and grading policy to departmental programs and general academic affairs. (Page 21, Student-Faculty Interaction)

A total of nearly 40 joint committees exist within the College including 14 new committees added during the past year.

These student-faculty committees, augmented by the Student Course Evaluation Program provided impetus for extensive curriculum improvements and new courses and/or modifications.

Fourteen new courses were approved during the year along with two major course modifications. (Page 23, New Courses, Seminars and Colloquia)

C. Malawi Undergraduates

B.S. Degrees were awarded to the last four of nine Malawi students enrolled in the agricultural sciences program. Graduates were Edward Malenga, Khindon Masangano, and Vincent Saka. Martin S. Mughogho completed requirements for his B.S. degree in January and during the spring semester attended Cornell University Graduate School. He earned 13 credits toward the Master's Degree and has returned to Bunda College, University of Malawi, as a junior lecturer in soil science and assistant farm manager.

Mr. Malenga and Mr. Masangano have not yet been assigned positions in the Malawi Ministry of Agriculture. Mr. Saka will spend three months as a

laboratory apprentice at the Cranberry Station, East Wareham, Massachusetts, specializing in the field of nematology.

Peter Makhambera, Class of '68, a junior lecturer in animal science at Bunda College, has been awarded an African/American Institute Scholarship for graduate study in the physiology of reproduction this fall at the University of Minnesota.

D. AQUACULTURAL ENGINEERING LABORATORY

An Aquacultural Engineering Laboratory of the Massachusetts Agricultural Experiment Station was established in November 1969 for marine food research aimed at developing new sources of food. Dr. John W. Zahradnik, Department of Agricultural Engineering, was designated principal scientist.

The initial project of the Laboratory is a cooperative shellfish management effort with the Towns of Marion and Mattapoisett, and the Massachusetts Division of Fisheries, funded by the two towns and the University.

Potential oyster spawning, setting and growth areas will be identified in the waters of the two towns, and the growth characteristics of oysters evaluated in an attempt to select the best strains for propagation by man. Water quality in the two areas under study also will be monitored.

E. FOOD RADIATION FACILITY

Three years of effort and negotiation by the Departments of Food Science and Technology and Agricultural Engineering reached a climax in May with the establishment of a Food Radiation Facility.

The new Facility is funded by the University and the U. S. Public Health Service with matching $25,000 grants for the purchase of a 50,000 curies of Cobalt-60 radiation unit, plus funds from the Agricultural Experiment Station. The Atomic Energy Commission will provide the Cobalt-60 source valued at about $50,000. The Facility will be located in the Agricultural Engineering Department laboratory and is scheduled for completion in October of this year.

While the Facility will be used primarily for research and graduate training in the radiation of food by the two departments, it also will provide an effective research radiation facility for the University community.

F. GOLD MEDAL AWARD TO PROFESSOR ROBERT E. YOUNG

The Massachusetts Society for Promoting Agriculture, Boston, Massachusetts, in April 1970, presented a gold medal and $1,000 to Professor Robert E. Young of the Department of Environmental Sciences (Waltham) for "his contributions to the prosperity of the vegetable industry with his improved varieties and his efforts to help solve the problems of growers."

In June, Professor Young also was awarded a $1,000 Ford Motor Company grant for research into squash mosaic, a virus disorder of economic

importance. The award was made in cooperation with the University of New Hampshire, which received a similar amount.

The Waltham Butternut Squash, developed by Professor Young, received a 1970 All America Crop Selection Award.

G. COOPERATIVE EXTENSION NUTRITIONAL EDUCATION

The expanded Nutrition Program for low-income families in the Commonwealth completed a full year of operation following its inception in January 1969. More than 150 nonprofessional teaching assistants are working with over 2,000 families.

Adult units under the supervision of the Extension Division of Home Economics now are located in 11 counties and the Boston area. The objective of the program is to help disadvantaged homemakers plan, buy, and use food more effectively.

The program has been further expanded with the addition of 4-H programs for young people in depressed urban areas. These programs are located in five counties and Boston. Over-all, a total of 29 statewide programs are in operation.

Seven professional home economists manage the new 4-H nutrition programs. Forty-eight neighborhood program assistants have been employed and trained thus far to serve in the following areas: Springfield, Greenfield, Northampton, Worcester, Lynn, Boston, and Somerville.

H. WOOD PRODUCTS TECHNOLOGY OFFICE WITH MT. WACHUSETT COMMUNITY COLLEGE

A wood products technology office was established at Mt. Wachusett Community College, Gardner, Massachusetts, in the summer of 1969, to provide technical and advisory services to furniture and other woodworking plants in the area.

Initiation of a two-year degree program in wood products technology at Mt. Wachusett is another phase of the new office.

Two seminars were conducted for representatives of wood-using companies, one on "Techniques to Improve Lumber Yield in the Plant," and the other on "Furniture Factories of the Next Decade."

The office was established through the efforts of the wood science and technology staff of the Department of Forestry and Wildlife Management, Mt. Wachusett Community College, and the woodworking industry. The Commonwealth Technical Resources Service (COMTECH) provided financial support. Technical assistance for the work with industry and the two-year course is being provided by the Cooperative Extension Service.

I. TECHNICAL GUIDANCE CENTER FOR ENVIRONMENTAL CONTROL

The Center, initiated in the Department of Environmental Sciences (Amherst) early in 1969, is rapidly establishing itself as a major information

source on pollution control and environmental quality for industry and municipalities in the Commonwealth.

Activities of the Center during the year included the assembly of a directory of engineering and consulting firms specializing in pollution control; the sponsorship of workshops in cross-connection control and solid waste disposal, and the publication of the proceedings; and the publication of a monthly newsletter.

The Center, established as a clearing house of information on soil-water-air pollution and environmental quality control, is supported by a grant from the Commonwealth Technical Resources Service (COMTECH).

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AAS:MRE
8/18/70

ANNUAL REPORT

OF THE

COLLEGE OF ARTS AND SCIENCES

1969-1970

UNIVERSITY OF MASSACHUSETTS AT AMHERST

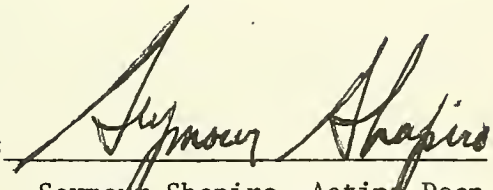
UNIVERSITY OF MASSACHUSETTS

College of Arts and Sciences

A N N U A L R E P O R T

Period Covered: July 1, 1969 through June 30, 1970

Submitted to: Chancellor Oswald Tippo

Submitted by: 

Seymour Shapiro, Acting Dean
College of Arts and Sciences

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APPENDIX B

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NEW FACULTY APPOINTMENTS FOR 1970-71. . . . . B- 1

Humanities and Fine Arts (B-1)

Social and Behavioral Sciences (B-10)

Natural Sciences and Mathematics (B-18)

I. BUDGET

A. BUDGET ALLOCATIONS

	FY 1968	FY 1969	FY 1970
Account numbers:			
03 - Salaries, other [1]	$ 168,000	$ 211,113	$ 251,000
10 - Travel	37,000	42,000	42,000
12 - Repairs and maintenance	40,000	41,787	43,000
13 - Supplies	238,000	265,000	245,000
14 - Postage, telephones and memberships	99,000	119,300	104,300
15 - Equipment	187,000	210,000	193,020
16 - Rentals	20,000	25,000	25,000
Total	789,000	914,200	903,320
Salaries:			
Accounts 01, 02	7,895,140	9,001,698	11,376,371
Account 03	30,159	23,434	22,027
Grand Total [2]	$8,714,299	$9,939,332	$12,301,718

Notes:

(1) Figures do not include faculty salaries paid from account 03.

(2) No allocations are made to the College or to individual departments for the purchase of books.

B. FUNDS ENCUMBERED, FISCAL YEARS 1967 - 1970

The total funds reported by the Treasurer's Office to have been encumbered by direct payment or transfer in each of the several accounts during each of the past four years is presented in the table below. Also indicated is the "dollars per student credit hours (SCH)" and, for accounts 10, 14 and 14-1 the "dollors per full-time equivalent faculty position". Positions in the Dean's Office have been included in the total of faculty positions. Finally, the total encumbered for supplies, equipment, etc. (accounts 10-16) is presented as a percent of salaries and other payments to individuals (accounts 01, 02 and 03).

	FY 1967	FY 1968	FY 1969	FY 1970
Student credit hours (SCH)	138,692	152,731	164,288	173,587
Faculty positions	533	606	668	735

	FUNDS ENCUMBERED			
	FY 1967	FY 1968	FY 1969	FY 1970
Salaries:				
01 + 02 + 03 Fac.	$6,456,621	$7,925,299	$9,025,132	$11,398,398
Other 03	169,800 1.22/SCH	161,169 1.02/SCH	211,113 1.29/SCH	252,085 1.45/SCH
Total 01, 02 and 03	$6,626,421	$8,086,468	$9,236,245	$11,650,483
Other accounts:				
10 - Travel	$ 33,500 0.24/SCH 62.42/Fac.	$ 38,517 0.25/SCH 63.04/Fac.	$ 42,126 0.26/SCH 63.06/Fac.	$ 43,496 0.25/SCH 59.18/Fac.
12 - Repairs and Maintenance	38,210 0.28/SCH	43,031 0.28/SCH	44,886 0.27/SCH	44,109 0.25/SCH
13 - Supplies	203,990 1.47/SCH	241,495 1.58/SCH	273,342 1.66/SCH	248,237 1.43/SCH
14 - Postage, Memberships	22,100 0.16/SCH 41.08/Fac.	27,370 0.18/SCH 44.79/Fac.	22,987 0.14/SCH 34.41/Fac.	18,573 0.11/SCH 25.27/Fac.
14-1 - Telephone	59,940 0.43/SCH 111.41/Fac.	81,659 0.53/SCH 134.75/Fac.	99,171 0.60/SCH 148.46/Fac.	121,691 0.70/SCH 165.57/Fac.
15 - Equipment	243,020 1.75/SCH	188,236 1.23/SCH	210,294 1.28/SCH	193,698 1.12/SCH
16 - Rentals	18,450 0.13/SCH	21,975 0.14/SCH	24,672 0.15/SCH	23,652 0.14/SCH
Total, accounts 10-16 Accounts 10-16	$ 619,300 4.47/SCH	$ 642,283 4.21/SCH	$ 717,448 4.36/SCH	$ 693,456 3.99/SCH
Accts. 10-16 / Salaries 01, 02 & 03	9.35%	7.94%	7.77%	5.95%

Inspection of the table on the previous page reveals a continuing increase in payments in Accounts 01, 02 and 03 which include funds for the salaries of both the professional and non-professional staff, compensation for student and other hourly labor, honoraria to guest speakers, etc. The increase reflects both the increase in the size of the staff and the effects of inflation.

Expenditures in Accounts 10-16 provide the "things" which are required for teaching and research. The total sum encumbered in these accounts during the fiscal year is $24,000 less than in the previous year. Indeed, purchases of supplies and equipment were reduced approximately $46,000 while the cost of telephone service increased $22,000. Total encumbrances in these accounts amounted to only $3.99 per student credit hour as compared to $4.47 four years ago. That our ability to supply the "things" required for teaching and research has not kept pace with our growth and the effects of inflation is further emphasized by the significant reduction in the ratio of expenditures in Accounts 10 through 16 as compared to those in Accounts 01, 02 and 03.

II. ORGANIZATIONAL CHARTS

A. DEPARTMENTS AND ADMINISTRATIVE UNITS BY DIVISIONS

DEAN'S OFFICE

FINE ARTS AND HUMANITIES	SOCIAL AND BEHAVIORAL SCIENCES	NATURAL SCIENCES AND MATHEMATICS
Afro-American Studies	Anthropology	Biochemistry
Art	Asian Studies (1)	Botany
Comparative Literature (1)	Economics	Chemistry
English	Government (2)	Geology/Geography
French, Italian and Classics	Linguistics (1)	Mathematics/Statistics
Germanic Languages	Psychology	Microbiology
History	Sociology	Physics/Astronomy (3)
Music	Speech	Zoology
Philosophy		
Slavic Languages		
Spanish		

****

Notes:

(1) Linguistics, Comparative Literature and Asian Studies operate as separate units without departmental status.

(2) The Bureau of Government Research is a part of the Government Department.

(3) The Astronomy Program has a chairman who is also chairman of the Five-College Department.

B. DEGREES, MAJORS AND OTHER PROGRAMS OF STUDY

Majors for Bachelor of Arts Degree:

Anthropology
Art
Astronomy (1)
Biochemistry
Botany
Chemistry
Classics
Economics
English
French
Geography
Geology
German
Government
History
Italian
Journalistic Studies
Mathematics
Microbiology
Music
Philosophy
Physics
Pre-Dental Studies
Pre-Medical Studies
Pre-Veterinary Studies
Psychology
Russian
Sociology
Spanish
Speech
Zoology

Majors for Bachelor of Science Degree:

Astronomy (1)
Biochemistry
Botany
Chemistry
Geology
Mathematics
Microbiology
Physics
Pre-Dental Studies
Pre-Medical Studies
Pre-Veterinary Studies
Psychology
Zoology

Majors for Bachelor of Fine Arts:

Art Education
Studio Art

Majors for Bachelor of Music:

Music

Programs without a Major:

Asian Studies
Chinese
Comparative Literature
Danish
Japanese
Linguistics
Polish
Portuguese
Statistics
Swedish

Majors for Master of Art or Master of Science:

Anthropology
Art History
Biochemistry
Botany
Chemistry
Comparative Literature
Economics
English
French
Geology
German
Government
History
Mathematics
Microbiology
Philosophy
Physics
Psychology
Russian
Sociology
Spanish
Speech
Statistics
Zoology

Majors for Master of Fine Arts:

Art
English
Speech

Master of Music:

Music

Majors for Doctor of Philosophy:

Anthropology
Astronomy
Biochemistry
Botany
Chemistry
Comparative Literature
Economics
English
French
Geology
German
Government
History
Linguistics
Mathematics
Microbiology
Philosophy
Physics
Psychology
Sociology
Spanish
Zoology

Note:

(1) Five-College undergraduate degree program.

III. PERSONNEL

A. PROFESSIONAL

1. Administration, Faculty and Other Professional Personnel.

Statistical data concerning the professional personnel of the College is presented in five tables, as follows:

TABLE 1: PROFESSIONAL POSITIONS (FTE) FILLED BY RANK (Appendix A)

TABLE 2: NUMBER OF FACULTY POSITIONS (FTE) FILLED BY DIVISION, DEPARTMENT, AND RANK: FALL SEMESTER (Appendix A)

TABLE 3: PROFESSIONAL PERSONNEL ACTIONS (Appendix A)

TABLE 4: SALARY RANGES OF ARTS AND SCIENCES FACULTY BY RANK AND YEAR (1963-1970) (Appendix A)

TABLE 5: FACULTY SALARIES (February, 1970) COLLEGE OF ARTS AND SCIENCES, DISTRIBUTION BY RANKS (Appendix A)

In each of the above tables the numbers refer to full-time equivalent positions which are filled as of September of the indicated year.

The administrative organization and personnel in the Dean's Office remained unchanged from that of March, 1969. Both Deans Wagner and McFarland, however, have resigned from their administrative posts, effective at the end of the year.

Associate Dean Wagner has been responsible for most administrative details in the College since 1961, gradually delegating some of them to other newly appointed deans as the growth of the College dictated. He has served as chairman of the building committee for each of the new buildings assigned to the College during the past nine years and has been responsible for renovations and the assignment of space to departments. Dean Wagner has also been chairman of the College Curriculum Committee and has devoted considerable time and effort to the academic affairs of students. His knowledge, experience and administrative skills shall be greatly missed by all administrators in the University and by faculty and students in the College as he embarks on a sabbatical leave.

Assistant Dean McFarland joined the Dean's staff on a half-time basis four years ago with particular responsibility for the academic affairs of the class of 1970. During the past year he has in fact served very capably as academic dean for most upperclassmen in the College. He has also been a member of the College Curriculum Committee and has contributed a great deal in discussions of a wide variety of other academic problems. Professor McFarland will return to full-time teaching and research in the Department of History.

The number of faculty positions in the College very nearly doubled between September 1964 and 1969. During this interval the College has been strengthening its graduate programs by the recruitment of new faculty with the capability of directing doctoral theses. This action is largely responsible for the marked reduction in the percent of instructors and lecturers and the relative increase in the next two higher ranks over this six-year interval.

Sept. of	Instructors & Lecturers		Assistant Professors		Associate Professors		Professors		Total Faculty
	#	%	#	%	#	%	#	%	
1964	92.3	25.0	131.0	35.5	64.0	17.3	82.0	22.2	369.5
1965	100.8	22.2	175.2	38.8	82.0	18.3	93.5	20.7	451.5
1966	108.0	20.3	213.5	40.1	94.0	17.7	117.0	22.0	532.5
1967	119.7	19.7	238.3	39.3	125.0	20.6	123.0	20.3	606.0
1968	111.0	16.6	272.3	40.8	141.7	21.2	141.7	21.2	668.0
1969	105.0	14.3	279.0	38.0	179.7	24.5	170.8	23.2	734.5

The distribution of faculty positions among the three divisions of the College has shifted slightly from the natural sciences and mathematics to the social and behavioral sciences. Six years ago approximately 36% of the positions were in the natural sciences and mathematics as compared to 33% last fall. Comparable values for the social and behavioral sciences are 22% and 25%. The number of positions in the fine arts and humanities has remained very close to 42% of the total each of the past six or more years. The change in distribution of positions probably reflects both a limitation on space for additional faculty in some of the science departments and a response to the increasing demands of students for courses in the social and behavioral sciences.

Three named professorial chairs were approved during the year. The V. O. Key Professorship of Government was occupied by Professor William C. Havard who resigned at the end of the academic year to become Dean of Arts and Sciences at Virginia Polytechnic Institute. The Joseph B. Ely Professorship of Government will be occupied by Dr. John W. Lederle, who resigned as President of the University at the end of the present year. The Ray Ethan Torrey Professorship of Botany will be occupied by Dr. Albert C. Smith who will join our faculty in the fall. Professor Smith, a member of the National Academy of Sciences, is widely known for his research on the systematics of higher plants and evolutionary biology.

Three new non-teaching, professional positions, namely staff assistants, were added this year. The distribution according to departments of the thirteen positions of this kind was as follows:

Staff Associates - Botany and Physics.
Staff Assistants - Botany, Chemistry, Dean's Office, Geology, Government (Bureau of Government Research), Language Laboratory, Mathematics, Psychology, Sociology, and Zoology.
Professional Technician - Psychology.

The allocation of additional non-teaching professional positions would provide the heads of other of the larger departments with more time for concentration on academic affairs as well as their own teaching and research and provide more significant recognition and reward for the best of our non-professional staff.

Teaching assistants numbered 545, an increase of 73 over the year before, with the average stipend set at $3,000. Provost 03 allocation for support of teaching assistants provided the salary of 384 of the T.A.'s. The total number of teaching assistantships in September, 1969 was equivalent to 74 percent of the number of faculty positions; the percentages for 1967 and 1968 were 67 and 71, respectively.

Post-doctoral research associates numbered 31. They are supported on grant funds, but their contribution to the scholarly activities in the six departments in which they worked is significant.

Professional personnel actions, summarized in Table 3, are more numerous each year because of the growth of the faculty. No further explanation of the data is required.

It is with deep regret that I must note the death of three members of the professional staff during the year. Dr. Joe W. Swanson, Professor of Philosophy, joined our faculty in 1958. He maintained an active program of research with a number of publications, though he will be remembered particularly as an unusually effective teacher. His teaching of symbolic logic and the philosophy of science brought wide acclaim, and his guidance of upperclassmen and graduate students in the individual study of particular problems was recognized to be outstanding.

Mr. James Butler, Staff Assistant in the Department of Romance Languages, was responsible in large measure for both the design and operation of the language laboratories. His technical skill and sensitivity to the requirements of an effective teaching laboratory contributed greatly to the successful teaching of introductory courses in foreign language.

Mr. Vincent F. McCormack joined our faculty as Instructor, Department of Mathematics, this fall. The enthusiastic endorsement of the department for his reappointment testified of their sense of loss after only one year as a member of their faculty.

2. Appointments to the Rank of Professor Emeritus.

Three members of the faculty retired at the end of the academic year and were appointed Professor Emeritus.

Professor Stowell C. Goding joined the University faculty in 1927 and was former Chairman of the Romance Language Department. Dr. Goding has for several years been director of the Summer Institute for Advanced Study for Secondary School French Teachers in Arcachon, France, sponsored by the University and supported by the U. S. Office of Education. He is a former president of the New England Modern Language Association. Dr. Goding has twice been decorated by the French government, an honor awarded for "eminent merit as professor of French languages and Literature in American colleges and universities." His contribution to the College and University is widely recognized and gratefully acknowledged.

Professor Frederick C. Ellert began to teach at the University in 1930. From 1951 to 1965 he served as Head of the German Department which he helped develop and bring to prominence. He gave much thought and care to improving language

instruction and actively explored new teaching methods. During his tenure the Department received a grant from the Carnegie Foundation to support these efforts. He also initiated the University's first foreign study program in Freiburg, Germany; a notable experiment in international education and cultural exchange. In his long career Dr. Ellert brought special gifts to the teaching of language and poetry. Many students have benefited from his careful instruction and helpful counsel, in and out of the classroom. Professor Ellert served the University on many important committees and spoke effectively for the humanities. As a co-founder and first editor of the Massachusetts Review he made a creative contribution and brought wide recognition to the University. A scholarship is being endowed in his name to honor his services to liberal education.

Professor Theodore C. Caldwell, who specializes in English history, was first appointed to the University faculty in 1935. In addition to his academic duties, Professor Caldwell was a faculty fellow for the Southwest Residential College and a member of the History Department Executive Committee. He also served on such University committees as University Affairs and the College of Arts and Sciences Curriculum Study Committee. Professor Caldwell is the author of "The Anglo-Boer War---Why Was It Fought?", which was published by D. C. Heath of Boston as part of the "Problems in European Civilization" series.

An endowment fund was created in honor of Professor Caldwell, the income from which will be used for books for the Library, awards to deserving students, research in history and books for the History Department library.

3. Faculty Salaries.

The maximum, median, and minimum salary at each rank each year from 1963-1964 to the present is recorded in Table 4. The distribution of particular salaries as of February 1, 1970 is shown graphically in Table 5.

The median salary of professors, exclusive of fringe benefits, is only 3 percent less than the amount required for an "A" rating on the AAUP scale for total compensation. The median salaries at the lower ranks are very close to "AA" level of total compensation. The minimum salary, at each rank, if the lowest 2 percent are excluded, is equivalent to slightly less than that required for an "AA" rating for total compensation. The difference ranges from a high of 7.4 percent of salary at the rank of professor to a low of 2.1 percent of salary for instructors; fringe benefits surely make-up these differences. In summary then, we must continue to work toward improved salaries at the rank of professor and to maintain our position in respect to salaries at the other ranks.

B. NON-PROFESSIONAL PERSONNEL.

Statistical data concerning the non-professional personnel of the College is presented in three tables, as follows:

TABLE 6: NON-PROFESSIONAL POSITIONS BY RANK (Fall of each indicated year) (Appendix A)

TABLE 7: FACULTY POSITIONS AND SECRETARIAL POSITIONS - (FTE BASIS), 1969-70 (Appendix A)

TABLE 8: RATIOS OF FACULTY POSITIONS TO SECRETARIAL POSITIONS AND TO TECHNICAL POSITIONS (Fall of each indicated year) (Appendix A)

Although most members of the non-professional staff are worthy of high praise, the emphasis here must again be on the inadequate number of clerical and technical positions assigned to the College. Eight new clerical positions were added this year, including two "Head Clerks", the first positions at this grade in the College, yet this number of new positions simply maintained the 8:1 faculty-secretarial ratio. Five new technical positions reduced the ratio of faculty to technical positions from a value of 15.2 last year to 14.9 this year, but these values were 12.7 and 13.5 in the fall of 1966 and 1967 respectively.

Members of the faculty could devote more time to their students if they were freed from many of the secretarial and technical chores now forced upon them. One secretary for each five faculty positions is still the goal of the College for the near future.

IV. STUDENTS

Both undergraduate and graduate programs are of concern to the College. This section of the report pertains primarily to the undergraduates, however, because of their close association with the College as a whole; graduate students are generally quite closely associated with their particular departments.

A. ENROLLMENT, TEACHING LOADS.

Statistical data is presented in the following tables:

TABLE 9: COMPARATIVE ENROLLMENTS (HEAD COUNT) AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST BY CLASSES AND BY COLLEGES (September of each year) (Appendix A)

TABLE 10: COMPARATIVE ENROLLMENTS IN PERCENTAGES AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST BY CLASSES AND BY COLLEGES (September of each year) (Appendix A)

TABLE 11: TEACHING LOAD SUMMARY, (Fall Semester 1969) (Appendix A)

TABLE 12: STUDENT CREDIT HOURS, Fall 1964-1969 (Graphic Presentation) (Appendix A)

TABLE 13: FTE STUDENTS BY DEPARTMENT AND DIVISION (Fall Semester) (Appendix A)

TABLE 14: STUDENT-TO-FACULTY RATIOS (September 1969) WITH AND WITHOUT TEACHING ASSISTANTS (Appendix A)

Total University enrollment increased by 2,335 students over the year before. Nearly two-thirds of this number were in the College of Arts and Sciences, i.e., 1,234 undergraduates and 260 graduate students (See Table 9). Changes in the distribution of students according to class and school or college affiliation are most easily discerned by reference to Table 10 in which enrollments are presented in percentages. Whereas the University as a whole continued its announced policy of more rapid growth of the graduate than the undergraduate schools, this was not true of the College. The reason for the relatively lesser growth of graduate enrollments in the College is uncertain; it is to be hoped that there will be a reversal of this situation in the year ahead.

In the fall semester, 1969, the College provided 173,869 student credit hours of instruction in 2,603 sections of 815 courses (Table 11). Student contact hours (198,654) exceed credit hours by 14.3%; this is a rough measure of the laboratory work which is a part of some courses. The number of students who undertake "Special Problems" and "Senior Honors" (SP,H) is still small (331) though it is 50% greater than a year ago and three times the number in September 1967. The number of graduate dissertations in progress is also recorded in Table 11. In the fall of 1967 it was reported that 260 Ph.D. theses were in progress; their number last fall was 317. It is suspected that the report of 402 in 1968 may have been in error and there has been continuing growth of the graduate program at the doctoral level.

The extent to which each department has participated in the ever-increasing teaching load is illustrated graphically for the years 1964 to date in Table 12. Because the data is presented on a logarithmic scale, the slope of each line is proportional to the rate of increase in student credit hours of instruction; lines for 8%, 10% and 12% increase per year are drawn for purposes of comparison. It is apparent that the greatest increase relative to load in 1964 has been in the fine arts and the social sciences, though enrollment in courses in Government have not increased markedly. The student credit hours of instruction in each of the foreign languages has increased, though the effect of the change in the requirements of the College in this area is apparent. Similarly, enrollment in courses in most of the natural sciences were reduced last year reflecting, no doubt, the reduction of liberalization of the math-science requirements of the College, though the increase since 1964 is still considerable.

Much of the instruction provided by the College is in the nature of a service to students with majors in other divisions of the University. It is, therefore, of interest to calculate the number of full-time equivalent (FTE) students enrolled in our courses. Fifteen undergraduate student credit hours are calculated to be equivalent to one FTE student; data on FTE graduate students are provided by the graduate school. The data, summarized in Table 13, indicate a 3% increase in September, 1969 over the year before in the total number of FTE students. There was a 6% increase in 1968 over 1967. Most of the increase is in the social and behavioral sciences though there were marked variations between departments in each of the divisions of the College. The ratio of FTE students to majors has been very close to 1.4 for each of the past three or more years, but is has been reduced to little more than 1.2 this year. Apparently a greater number of our students than heretofore carried reduced loads or took more courses outside the College, or the enrollment of students from other schools in our courses was less than in previous years.

Student/faculty ratios, based upon full-time equivalent students and faculty positions, are presented in two forms in Table 14. The calculation is first made using only faculty positions and then with teaching assistants counted as sharing the load. The teaching assistant equivalent is an approximation obtained by the rule that three teaching assistantships are equivalent to one FTE faculty position and that an assistantship results from the sum of money ($3,000) available as an average stipend.

Both my predecessor and I have indicated our conviction that the student/faculty ratio must be reduced rapidly to 15:1 if the undergraduate is to receive more individual attention and the graduate program is to develop. Even a 15:1 ratio means that the instructor who teaches only undergraduates has an average load of 225 student credit hours per semester; with five full-time graduate students his undergraduate load is still 150 student credit hours. It is, therefore, reassuring to recognize a continuation of the progressive lowering of the ratio of students to faculty positions. The ratio for the College as a whole now stands at 16.4 as compared to 18.7 during the academic year 1966-67. Considerable variations exist between departments, however, and our recruiting efforts this year have been directed, in part, toward a reduction of the particularly high ratios in Anthropology, Psychology and Sociology.

B. MAJORS.

Statistical data is presented in the following tables:

TABLE 15: STUDENT MAJORS (HEAD COUNT) BY DEPARTMENT AND DIVISION (Fall Semester) (Appendix A)

TABLE 16: UPPERCLASS MAJORS BY DEPARTMENT AND DIVISION (Spring Semester) (Appendix A)

Inspection of the data on undergraduate majors presented in Table 15 reveals a significant increase in the social and behavioral sciences, a decrease in the natural sciences and mathematics and, perhaps of greatest significance, a very great increase in the number of undergraduates, almost exclusively freshmen and sophomores, who had not yet selected a major last fall so are listed under "CASIAC". A report on the operation of the CASIAC office appears in a subsequent section of this report. Suffice it to note here that the increase in numbers of undergraduates with unspecified majors masks any changes in the selection of undergraduate departmental and program majors.

Changing patterns in the major selected by undergraduates may be detected by study of the data in Table 16 which considers only the upperclassmen. (Data is based on the spring semester whereas all previous tables present data for the fall semester.) During the past year 52% of the upperclassmen had majors in one of four departments, namely English (17.98%), History (11.80%), Psychology (11.30%) and Sociology (10.90%). This is a consequence of a continuing and marked growth in the latter two departments. The absolute number of students enrolled in almost every major has increased, but declines of probable significance have occurred in the percent of upperclassmen with majors in the foreign languages, government, chemistry, mathematics and pre-medical program.

The number of graduate students has increased each of the past three years in each of the three divisions of the College. The greatest relative increase has been in the social sciences, though the absolute increase is very nearly the same as that in the fine arts and humanities. Limitations of space probably account for the lesser increase in the number of graduate students in the natural sciences.

C. DEGREES AWARDED.

A summary of the degrees awarded is presented in Table 17.

D. C.A.S.I.A.C. - COLLEGE OF ARTS AND SCIENCES INFORMATION AND ADVISORY CENTER.

During this second year of full time operation, C.A.S.I.A.C. showed a great increase in all activities. More students chose the CAS undefined major; requests for academic-curricular information and counsel expanded markedly; and summer counseling increased many-fold.

The number of freshmen selecting the CAS undefined major status has increased each year since C.A.S.I.A.C. was set up. The magnitude of these trends are shown in the following table.

	Class		
	1971	1972	1973
Total Arts and Sciences students:	1,979	1,865	2,391
Number of CAS majors:			
Sept. '67	200		
Sept. '68	175	925	
Sept. '69	-	500	1,225
June '70	-	270	1,050

These data show the increase, year by year, of freshmen selecting the CAS designation. The increase in itself is probably desirable; however, a second trend appears that may be less desirable. In the class of 1972, after four semesters residence, 270 had not selected a major and repeated efforts encouraging these students to select a major gave only limited results. Perhaps among the 270 hold-overs are many who are hopefully awaiting the often referred to (but not yet approved) interdisciplinary major in the College. Whatever the cause, continued efforts must be made to assist students in the reasonably early selection of a meaningful major.

The seasonality of our work load still exists because of peak loads during pre-registration periods. In the fall, about 1,200 students visited our offices in the precounseling period. Many came to gain information about certain options that were presented with the passage of the math-science portion of the June Proposal; others came for pre-registration advice. In both fall and spring, over 50 percent of all CAS students appeared for pre-registration counsel and advice. However, many students still do not utilize any advisory service, departmental or C.A.S.I.A.C., and those seeking no counsel whatsoever, are most frequently the students who most need this kind of service.

The operation that expanded most notably during the year and perhaps the one that showed the greatest degree of improvement, was the summer pre-registragion counseling of freshmen and transfer students. During the summer of 1969, C.A.S.I.A.C. had participated in the summer orientation program in an advisory capacity only, but this year, we supervised and were responsible for the entire academic counseling program. During June and July, we handled about 3,100 students, including some 250 swingshift freshmen, 2,300 regular freshmen and about 550 transfer students. The success of the program was due largely to effective counseling by the faculty. Dean Shapiro had made additional funds available for increased faculty participation and the faculty came to us generally well informed and enthusiastic. Because of the faculty enthusiasm and competence, many students who came in with no well defined major were motivated to select a major. In consequence, the number of CAS undefined majors will be conspicuously lower this year than it was a year ago. Unfortunately, a second item may also have contributed to the decline in acceptance of CAS status. With the passage of the June Proposal, the College requirements were altered and more free electives were allowed for most students. The electives most frequently selected were in various fields such as Art and the Social Sciences. These factors led to excessive flagging of courses in the various fields and it has become obvious that, at times, some students selected a "tentative" major merely to assure enrollment into the flagged courses.

Once again, C.A.S.I.A.C. reports that it will be moving. This time the move is to E-22 Machmer Hall. This move is being made to allow for reallocation of space in South College when the College reorganization is completed. The location in Machmer Hall will still be on a main traffic way; thus, we will be readily available for drop-in counseling.

E. CUMULATIVE AVERAGES WITHIN THE COLLEGE

Table 17-A depicts the percent of students in the College of Arts and Sciences with cumulative averages equal to or exceeding selected levels, by class, as of February 1970.

V. FACULTY

Information concerning faculty positions and faculty salaries is presented in Section III, Personnel and its tables (Appendix A, Tables 1-5).

A. PUBLICATIONS

Sixty-eight books and monographs written by members of the faculty were published during the year (Table 18). Of these, thirteen were published by the presses of eight different universities.

Several hundred articles in professional journals plus chapters in books, poems, and book reviews were also published, and many papers were presented at professional meetings by members of the faculty. Works of art were exhibited and concerts presented in this country and abroad by artists on the faculty.

B. SPONSORED RESEARCH AND SERVICE PROJECTS

Much of the research accomplished by members of the faculty is greatly facilitated by the award of grants for support of particular projects by both outside agencies and the University itself. An accurate determination of the number of awards and contracts consumated and the annual value of these for the State's fiscal year is not readily accomplished.

Included in Table 19 is a summary from the Treasurer's report of salaries paid during the fiscal year from non-State funds, at least 95% of which are reported to be funds from research and training grants. The total of these salaries for each of the last four years is presented below; the figures demonstrate the continuing growth of research support.

Fiscal Year	Total Salaries from non-State Funds
1967	$1,136,715
1968	1,287,428
1969	1,489,395
1970	2,200,737

C. OTHER PROFESSIONAL ACTIVITIES OF THE FACULTY

A complete list of the professional activities of the faculty would be voluminous, yet a meaningful summary is nearly impossible because of the diversity of activities. Many of the faculty have made significant contributions on the campus to their departments, the College and the University through work on a wide variety of committees, and through advising students and student groups. Others have contributed indirectly through activities associated with professional societies and advisory boards of federal support programs.

Table 20 is a compilation of those professional activities of the faculty which involve membership on editorial boards or advisory boards of national organizations, office in a regional or national professional organization, participation in a symposium sponsored by a national agency, or other activity which is thought to be of national significance.

VI. MAJOR ACCOMPLISHMENTS AND SPECIAL PROGRAMS

A. HONORS PROGRAM

The College Honors Program, having been approved by the University's Board of Trustees in August 1969, began operations the following month, with the beginning of the academic year. Some 120 students, three-fourths of whom were freshmen, were enrolled in the Program as Commonwealth Scholars at that time, and eight honors courses were offered. Since then two additional groups of students have been added, some 50 students at the beginning of the second semester, and some 30 students at the end of the academic year. With some attrition, a total of 192 Commonwealth were on campus at the end of the year. During the spring semester, eleven honors courses were taught, plus History 153 (two sections) and Economics 128, both judged by the College Honors Committee to have the characteristics of honors courses.

In April some one hundred high school seniors visited the campus for an introduction to the Program. Some forty of these, now admitted to the Program, have indicated that they will be attending the University in the fall. Most were attracted to the University by the opportunities of the Program. An additional forty will be selected during the summer counseling, and some transfer students as well. For the freshmen, sophomores, and juniors to be enrolled in the Program in the fall, sixteen honors courses will be offered, plus History 152 and Economics 127.

Thus, in the second year of its operation the Honors Program will have reached very significant proportions: some 300 students. Although there have been many problems to solve, some few of which remain difficulties, the College Honors Program seems to be very established. Among the factors responsible for this situation, especially worthy of note is the willingness of many Arts and Sciences departments to cooperate in the development of honors courses. By the end of the academic year 1970-71, the following departments will have supported the Program by providing outstanding faculty members for honors courses: Anthropology, Art, Asian Studies, Astronomy, Botany, Comparative Literature, Economics, English, French, Geology, Geography, German, Government, History, Slavic, Sociology, Speech and Zoology. A second significant factor has been the willingness of faculty members to serve as preceptors (honors program advisers). Third, the College Honors Committee, consisting of Professors Herman Cohen, Peter Lillya, Howard Quint, Ellen Reed, and T. O. Wilkinson, has provided valuable assistance and guidance to the chairman of the Program.

The Program appears to be a success if it is judged by its ability to meet the needs of the students it seeks to serve, but the time has not yet arrived when it can be adequately evaluated.

B. FOREIGN LANGUAGE REVIEW BOARD

The change in the Foreign Language Requirement, which became effective in July of 1969, provided for "an approved substitution of language related study if there is clearly demonstrated difficulty in language study."

The implementation of this provision was accomplished by establishing a Foreign Language Review Board sponsored jointly the Dean of the College and the Foreign Language Instruction Committee. Students submitted petitions for an "approved substitution" to this Board, which convened to act on petitions whenever there were enough accumulated to warrent a meeting. The membership of the Board varied from meeting to meeting, but always had three language teachers and two academic deans; one of the latter acted as chairman.

During the year there were 24 meetings at which 235 petitions were reviewed. Of these 161 were approved for all of the remaining work, 15 were approved for part of the remaining work and 59 were denied. However, 9 of the denials led to a new petition after more evidence had been gathered and 4 of these second petitions were approved. Two of the 5 second denials were re-submitted; one was approved and one was denied again.

In summary, 224 students presented petitions, 181 of them finally had substitution approved, and 43 (19 percent) did not. A reasonable estimate of the number of students who, by last September, had not completed the foreign language requirement is 2,500; using this quess, 9 percent of them sought relief and 7 percent got it.

C. REPORT OF THE CURRICULUM COMMITTEE

The first project of the Committee during this year was the development of a set of temporary College requirements which were quantitatively equivalent to the June Proposal, but which could become effective sooner. These interim requirements were ratified by the faculty.

A new major program in Comparative Literature was reviewed and approved by the Committee. Both the Art Department and the French section of Romance Languages (French, Italian and Classics) proposed major revisions of their undergraduate course offerings.

The Committee also reviewed 120 proposals for new courses and approved 114 of them. Included among these approved proposals were 16 changes which amount to expanding a semester course into a year course; this process amounts to a modification of the semester course and the addition of a new one. In addition 33 proposals for modification of a course were received, reviewed, and approved. Finally, 4 courses were deleted during the year.

D. REPORT OF THE ACADEMIC HONESTY COMMITTEE

After nearly two years of deliberation the Committee submitted a report to the faculty recommending that a standing committee on Academic Honesty be established and used its experience during the two years to recommend procedures for the Committee. The faculty adopted both recommendations.

The Committee also received seven reports of academic dishonesty. Two of these resulted in hearings before the Committee because the student presented an appeal; the others were handled between the student and the faculty member involved.

APPENDIX A

TABLE 1

PROFESSIONAL POSITIONS (FTE) FILLED BY RANK

	1967		1968		1969	
Administration:						
Dean	1		1		1	
Vice-Dean	1		1		1	
Associate Dean	1		2		2	
Assistant Dean	2		1.5		1.5	
Totals	5		5.5		5.5	
Faculty:						
Professors	123	(20.3%)	141.7	(21.2%)	170.8	(23.2%)
Associate Professors	125	(20.6%)	143	(21.4%)	179.7	(24.4%)
Assistant Professors	238.25	(39.3%)	272.3	(40.7%)	279	(37.9%)
Instructors	103	(17.0%)	91.4	(13.6%)	84	(11.4%)
Lecturers	16.75	(2.8%)	19.6	(2.9%)	21	(2.8%)
Totals	606		668		734.5	
Non-teaching:						
Staff Associates	1		2		2	
Staff Assistants	7		7		10	
Professional Technical	1		1		1	
Totals	9		10		13	
Teaching Assistants(1):	408		472		545	
Postdoctoral Research Associates (Not on State funds):						
Biochemistry	3		3		3	
Botany	1		-		-	
Chemistry	7		14		12	
Mathematics	1		-		-	
Microbiology	1		2		2	
Physics and Astronomy	4		11		5	
Psychology	-		1		1	
Sociology	1		-		-	
Zoology	8		9		8	
Totals	26		40		31	

Note:

(1) This FTE figure was obtained by dividing the total allocation for T.A.'s by the budgeted average stipend. The appropriate amounts were:

1967--$1,102,350 allocated; average stipend $2,700
1968--$1,274,400 allocated; average stipend $2,700
1969--$1,635,000 allocated; average stipend $3,000

TABLE 2

NUMBER OF FACULTY POSITIONS (FTE) FILLED BY
DIVISION, DEPARTMENT, AND RANK: FALL SEMESTER

	1967						1968						1969					
	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total
FINE ARTS AND HUMANITIES:																		
Afro-American Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(a)
Art	3	3	8	4	1	19	5.5	6	6	4	1	22.5	5	7	9	3	1	25
Comparative Literature	1	-	-	1	-	2	1	-	1	2	-	4	1	-	2	3	-	6
English	17	20	33.6	7	7.4	85	18.5	20	37.6	9.9	3.5	89.5	25	22	38.6	12	2.4	100
Germanic Languages	5	5	4	10	-	24	4	6	7	6	-	23	5	5	9	4	-	23
Hispanic Languages	-	-	-	-	-	-	-	-	-	-	-	-	6	3	7	5	1	22
History	8	7	20	10	.8	45.8	8	11	21	9	.8	49.8	12	12	20	5	1.8	50.8
Music	3	2	8	4	-	17	3	2	9	4	2	20	3	2	12	4	1	22
Philosophy	2	5	5	-	-	12	4	4	5	-	1	14	6	4	5	-	-	15
French, Italian & Classics (b)	7	9	13	20	-	49	10	11	15	18	1	55	7	9	14	7	1	38
Slavic Languages	1	1	1	1	2	6	-	3	1	1	1	6	1	3	1	1	1	7
Totals	47	52	92.6	57	11.2	259.8	54	63	102.6	53.9	10.3	283.8	71	67	117.6	44	9.2	308.8
SOCIAL AND BEHAVIORAL SCIENCES:																		
Anthropology	-	-	-	-	-	(c)	-	-	-	-	-	(c)	2	3	5	-	-	10
Asian Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Economics (d)	6	4	7	6	-	23	7	3	12	1	-	23	7	3	12	2	2	26
Government	10	6	11	4	-	31	11	6	13	2	1	33	11	9	11	2	1	34
Linguistics	-	-	-	-	-	-	-	1	1	-	-	2	-	1	2	-	-	3
Psychology	6	3	15	-	-	24	8.7	7	17.8	-	-	33.5	9.8	10.7	19	-	1	40.5
Sociology	8	6	10	2	-	26	6	10	11	1	-	28	8	12	3	1	-	24
Speech	4	2	16	13	-	35	6	3	20	14	-	43	8	5	20	13	-	46
Totals	34	21	59	25	-	139	38.7	30	74.8	18	1	162.5	45.8	44.7	72	18	4	184.5

TABLE 2, Continued

	1967						1968						1969					
	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total
NATURAL SCIENCES & MATHEMATICS:																		
Biochemistry	1	3	3	-	-	5	1	3	2	-	.5	6.5	1	3	2	-	.5	6.5
Botany	3	5	8.7	1	-	17.7	6	5	6.7	1	-	18.7	6	5	7.7	-	-	18.7
Chemistry	9	7	14	6	-	36	10	6	13	6	-	35	11	10	10	6	-	37
Geology/Geography	2	7	5	3	-	17	3	7	6	1	-	17	4	9	4	2	-	19
Mathematics/Statistics	11	12	22	9	5.5	59.5	11	11	28.2	10.5	7.8	68.5	13	12	32.7	12	7.3	77
Microbiology	2	2	3	-	-	7	2	2	5	-	-	9	2	3	5	-	-	10
Physics and Astronomy	6	12	19	1	-	38	8	12	20	-	-	40	10	20	16	-	-	46
Zoology	8	4	14	1	-	27	8	4	14	1	-	27	7	6	12	2	-	27
Totals	42	52	86.7	21	5.5	207.2	49	50	94.9	19.5	8.3	221.7	54	68	89.4	22	7.8	241.2
College Totals	123	125	238.3	103	16.7	606	141.7	143	272.3	91.4	19.6	668	170.8	179.7	279	84	21	734.5

Columns (1), (2), (3), (4) and (5) indicate the number of positions at the rank of Professor, Associate Professor, Assistant Professor, Instructor and Lecturer, respectively.

Notes:

(a) No actual allocation of positions this year (1969-70). Appointments were attached to the English Department for bookkeeping purposes. (All positions used were borrowed.)

(b) Faculty positions in Hispanic Languages are included in those listed for French, Italian and Classics for the years 1967 and 1968.

(c) Anthropology and Sociology were a single department prior to the 1969-70 academic year.

(d) The Bureau of Government Research is a part of the Government Department.

TABLE 3

PROFESSIONAL PERSONNEL ACTIONS

	1967-68	1968-69	1969-70
Promotions	42	45	66 (1)
Tenure Appointments	20	36	50
Resignations and Terminations	56	50	44
Retirements	1	2	5
Deceased	1	-	3
Merit Increases	452	519	569 (2)
Sabbatical Leaves taken during the academic year	21	24	30 (3)
Leaves of Absence without pay taken during the academic year	19	27	25 (4)

Notes:

(1) One effective September 1, 1970.

(2) Six effective September 1, 1970.

(3) Fourteen full year; 10 first semester; 6 second semester.

(4) Fifteen full year; 6 first semester; 4 second semester.

TABLE 4

SALARY RANGES OF ARTS AND SCIENCES
FACULTY BY RANK AND YEAR (1963-1970)

	Maximum	Median	Minimum	
Professors:				
1963-64	$18,111	$13,858	$12,246	
1964-65	19,713	14,900	13,098	
1965-66	21,000	15,288	11,484	($12,477)
1966-67	24,000	17,000	12,200	(14,200)
1967-68	26,000	18,000	14,500	(15,000)
1968-69	30,000	19,000	15,500	(15,500)
1969-70	33,600	22,000	17,000	(17,500)
Associate Professors:				
1963-64	12,719	10,826	9,739	
1964-65	13,858	11,484	9,939	
1965-66	15,574	11,819	10,168	
1966-67	19,600	13,450	11,000	(11,500)
1967-68	20,500	14,000	10,900	(12,000)
1968-69	21,000	14,700	12,200	(12,300)
1969-70	24,300	16,500	11,000	(13,000)
Assistant Professors:				
1963-64	10,353	8,795	7,880	
1964-65	11,819	9,253	7,467	
1965-66	12,719	9,596	7,508	
1966-67	13,000	10,800	7,800	(8,600)
1967-68	13,500	11,000	8,100	(9,100)
1968-69	14,500	11,400	8,100	(9,200)
1969-70	19,800	12,800	9,000	(10,000)
Instructors:				
1963-64	8,567	7,165	5,820	
1964-65	8,795	7,165	5,964	
1965-66	9,053	7,165	5,964	
1966-67	10,000	8,000	6,400	(6,500)
1967-68	11,500	8,200	6,400	(6,400)
1968-69	11,900	8,500	6,400	(6,400)
1969-70	13,700	9,500	6,400	(7,500)
Lecturers:				
1966-67	10,900	9,300	6,500	(6,500)
1967-68	14,400	10,400	6,400	(6,400)
1968-69	12,500	11,200	6,400	(6,400)
1969-70	18,900	10,000	7,000	(7,000)

Notes:

1. Computations made in the spring of each academic year.
2. Figures in parentheses represent minimum salaries if the bottom 2% are eliminated. This exclusion is customary in analyses by the A.A.U.P.

TABLE 5

FACULTY SALARIES (February, 1970)
COLLEGE OF ARTS AND SCIENCES, DISTRIBUTION BY RANKS

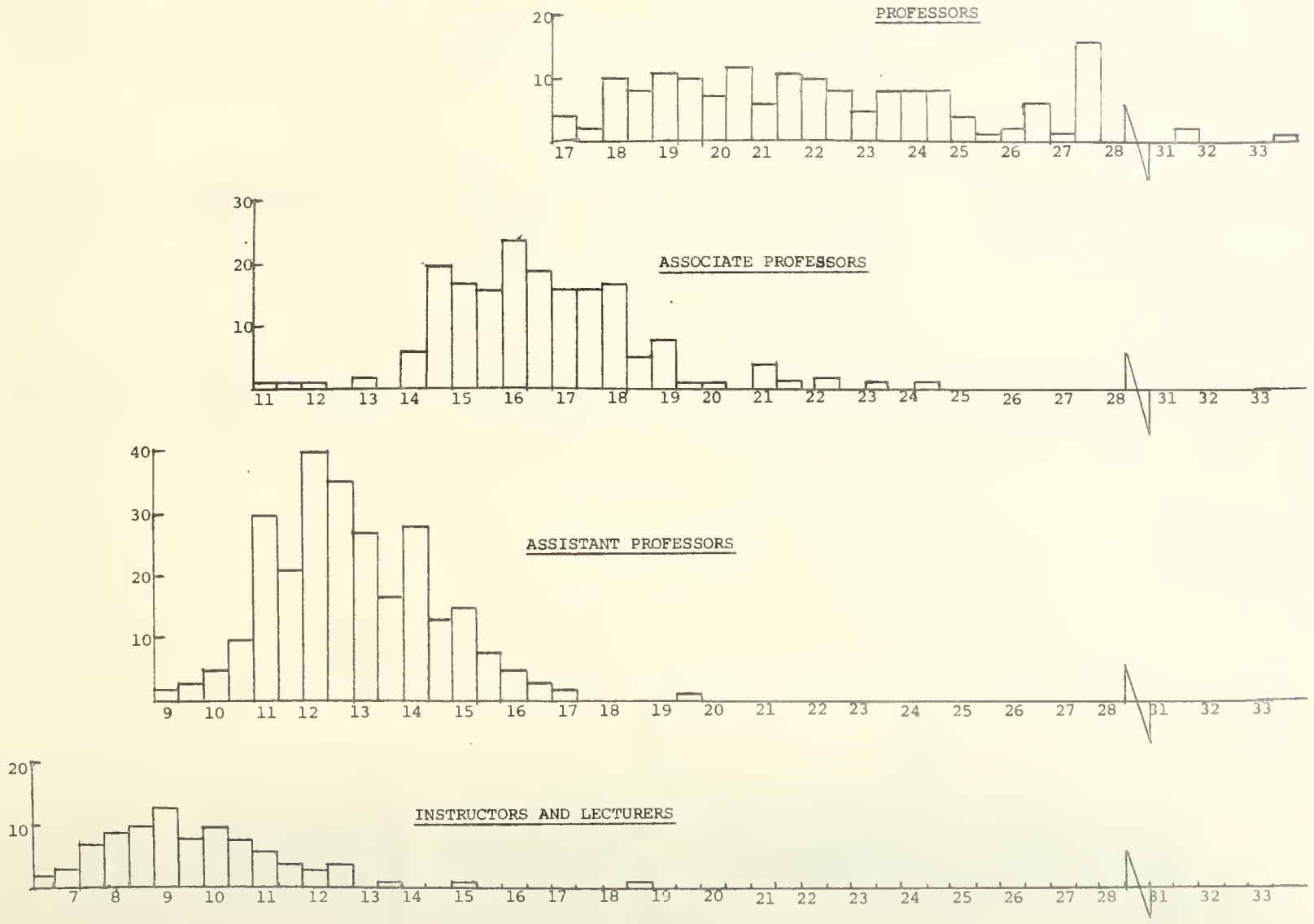

TABLE 6

NON-PROFESSIONAL POSITIONS BY RANK
(Fall of each indicated year)

Grade		1966	1967	1968	1969
	Secretarial:				
(11)	Head Clerk	-	-	-	2
(09)	Principal Clerk	6	7	9	12
(07)	Senior Clerk Stenographer	21	21	21	22
(06)	Senior Clerk Typist	11	13	14	14
(04)	Junior Clerk Stenographer	36	36	37	37
(03)	Junior Clerk Typist	6	6	9	11
	Totals	80	83	90	98
	Non-Secretarial (Technical):				
(13)	Statistician	-	-	-	1
(13)	Junior Chemist	-	-	-	1
(12)	Technical Specialist	1	3	3	3
(12)	Principal Storekeeper	1	1	1	1
(11)	Machinist Foreman	1	1	1	-
(10)	Storekeeper	3	3	3	3
(10)	Electronic Technician	3	4	4	4
(10)	Senior Technical Assistant	-	-	-	1
(10)	Machinist	2	2	2	2
(10)	Carpenter	1	1	1	1
(09)	Laboratory Technician	1	1	-	1
(08)	Technical Assistant	16	17	17	20
(07)	Mechanical Handyman	1	1	1	1
(07)	Herbarium Curator	1	-	-	-
(05)	Animal Room Attendant	1	1	1	1
(05)	Laboratory Assistant	9	9	9	8
(03)	Institutional Domestic Aid	1	1	1	1
	Totals	42	45	44	49

TABLE 7

FACULTY POSITIONS AND SECRETARIAL POSITIONS - (FTE BASIS), 1969-70

	Faculty Positions	Sec. Positions	Faculty/ Sec. Ratio	Highest Ranking Position
FINE ARTS AND HUMANITIES:				
Afro-American Studies	(a)	-	-	-
Art	25	2.5	10.0	Sr. Clerk Steno.
Comparative Literature	6	1	6.0	Jr. Clerk Typist
English	100	10	10.0	Head Clerk
French, Italian and Classics	38	1.5	25.3	Principal Clerk
Germanic Languages	23	3	7.7	Sr. Clerk Steno.
Hispanic Languages	22	3	7.3	Sr. Clerk Steno.
History	50.8	5	10.2	Principal Clerk
Music	22	2	11.0	Principal Clerk
Philosophy	15	1.5	10.0	Sr. Clerk Typist
Slavic Languages	7	1	7.0	Jr. Clerk Steno.
Total	308.8	30.5	10.1	
SOCIAL AND BEHAVIORAL SCIENCES:				
Anthropology	10	2	5.0	Sr. Clerk Steno.
Asian Studies	1	-	-	-
Economics	26	3	8.7	Principal Clerk
Government (b)	34	6	5.7	Principal Clerk
Linguistics	3	-	-	-
Psychology	40.5	6	6.8	Principal Clerk
Sociology	24	3	8.0	Sr. Clerk Steno.
Speech	46	5	9.2	Principal Clerk
Total	184.5	25	7.4	
NATURAL SCIENCES AND MATHEMATICS:				
Biochemistry	6.5	1	6.5	Jr. Clerk Steno.
Botany	18.7	3	6.2	Sr. Clerk Steno.
Chemistry	37	6.5	5.7	Principal Clerk
Geology and Geography	19	2.5	7.6	Principal Clerk
Mathematics and Statistics	77	7	11.0	Principal Clerk
Microbiology	10	1.5	6.7	Sr. Clerk Steno.
Physics and Astronomy	46	7	6.6	Head Clerk
Zoology	27	5	5.4	Principal Clerk
Total	241.2	33.5	7.2	
Departmental Total	734.5	89	8.3	
DEAN'S OFFICE:	5.5	8 (c)	-	Sr. Clerk Steno.
Grand Total	740.0	97.0	7.6	

Notes:

(a) Appointments were attached to the English Department.
(b) The Bureau of Government Research is a part of the Government Department.
(c) The secretary to the Pre-Medical Advisory Committee is included among those assigned to the Dean's Office.

TABLE 8

RATIOS OF FACULTY POSITIONS TO SECRETARIAL POSITIONS AND TO TECHNICAL POSITIONS[1]
(Fall of each indicated year)

	1966	1967	1968	1969
Faculty Positions	532.5	606.0	668.0	734.5
Secretarial Positions	74.0	77.0	83.5	89.0
Faculty/Secretarial Ratio	7.2	7.9	8.0	8.2
Faculty Positions	532.5	606.0	668.0	734.5
Technical Positions	42.0	45.0	44.0	49.0
Faculty/Technical Ratio	12.7	13.5	15.2	15.0

Note:

(1) Computations based on total faculty positions (FTE) and do not include personnel in the Dean's Office.

TABLE 9

COMPARATIVE ENROLLMENTS (HEAD COUNT)
AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST
BY CLASSES AND BY COLLEGES (September of each year)

	1955	1958	1961	1964	1965	1966	1967	1968	1969
Four-year Undergraduates:									
By Class:									
Freshmen	1,088	1,366	1,918	2,592	2,622	2,954	3,040	3,188	3,820
Sophomores	899	1,126	1,463	2,135	2,516	2,904	3,061	3,266	3,382
Juniors	897	914	1,323	1,781	2,225	2,602	2,964	3,235	3,695
Seniors	744	861	980	1,469	1,572	1,971	2,509	2,949	3,346
By School:									
COLLEGE OF ARTS AND SCIENCES	1,721	2,043	3,116	4,647	5,060	5,776	6,335	6,858	8,092
Total, All Other Schools	1,907	2,224	2,568	3,330	3,875	4,655	5,239	5,780	6,151
Agriculture	324	277	341	395	487	620	705	762	837
Business Administration	506	507	503	678	831	1,043	1,244	1,396	1,432
Education	(a)	274	426	607	695	840	862	972	1,213
Engineering	792	878	836	898	894	939	969	1,018	1,014
Home Economics	183	122	114	194	268	369	458	501	479
Nursing	37	63	102	176	203	255	287	313	320
Physical Education	65	98	246	278	367	467	589	692	741
Public Health	-	-	(a)	104	109	122	125	126	115
No Major	-	-	-	-	21	-	-	-	-
Total, Four-year undergrad.	3,628	4,267	5,684	7,977	8,935	10,431	11,574	12,638	14,243
Stockbridge Total	338	348	394	484	516	544	583	598	636
Graduate School:									
COLLEGE OF ARTS AND SCIENCES	-	-	-	(b)	1,131	1,325	1,461	1,527	1,787
Total, All Other Schools	-	-	-	(b)	1,109	1,119	1,374	1,580	2,014
Total, Graduate School	337	568	845	1,846	2,240	2,444	2,835	3,107	3,801
Special and/or Non-classified Total	38	88	96	190	168	190	210	209	207
UNIVERSITY TOTAL	4,341	5,271	7,019	10,497	11,859	13,679	15,202	16,552	18,887

Notes:

COMPARATIVE ENROLLMENTS IN PERCENTAGES
AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST
BY CLASSES AND BY COLLEGES (September of each year)

	1955	1958	1961	1964	1965	1966	1967	1968	1969
UNIVERSITY TOTAL - 100% equals	4,341	5,271	7,019	10,497	11,859	13,679	15,202	16,552	18,887
By Class:									
Freshmen	25.1	25.9	27.3	24.7	22.2	21.6	20.0	19.3	20.2
Sophomores	20.7	21.4	20.8	20.3	21.2	21.2	20.1	19.7	17.9
Juniors	20.7	17.3	18.9	17.0	18.7	19.0	19.5	19.5	19.6
Seniors	17.1	16.4	14.0	14.0	13.3	14.4	16.5	17.8	17.7
Total, Four-year undergraduate	83.6	81.0	81.0	76.0	75.4	76.2	76.1	76.3	75.4
Stockbridge Total	7.8	6.6	5.6	4.6	4.3	4.0	3.8	3.6	3.5
Graduate School:									
COLLEGE OF ARTS AND SCIENCES	-	-	-	(a)	50.5	52.7	51.5	49.1	47.3
Total, All Other Schools	-	-	-	(a)	49.5	47.3	48.5	50.9	52.7
Total, Graduate School	7.8	10.8	12.0	17.6	18.9	18.4	18.7	18.8	20.0
Special and/or Non-classified Total	.8	1.6	1.4	1.8	1.4	1.4	1.4	1.3	1.1
FOUR-YEAR UNDERGRADUATE TOTAL - 100% equals	3,628	4,267	5,684	7,977	8,935	10,431	11,574	12,638	14,243
By School:									
COLLEGE OF ARTS AND SCIENCES	47.4	47.8	54.8	58.2	56.6	55.3	54.7	54.3	56.7
Total, All Other Schools	52.6	52.2	45.2	41.8	43.4	44.7	45.3	45.7	43.3
Agriculture	8.9	6.5	6.0	5.0	5.5	5.9	6.1	6.0	5.9
Business Administration	14.0	11.9	8.9	8.5	9.3	10.1	10.7	11.0	10.1
Education	(b)	6.4	7.5	7.6	7.8	8.0	7.4	7.7	8.5
Engineering	21.9	20.6	14.7	11.3	10.0	9.0	8.4	8.0	7.1
Home Economics	5.0	2.9	2.0	2.4	3.0	3.5	4.0	4.0	3.4
Nursing	1.0	1.6	1.8	2.2	2.3	2.5	2.5	2.5	2.3
Physical Education	1.8	2.3	4.3	3.5	4.1	4.5	5.1	5.5	5.2
Public Health	-	-	(b)	1.3	1.2	1.2	1.1	1.0	.8
No Major	-	-	-	-	.2	-	-	-	-

Notes:
(a) A breakdown for figures in Graduate School not available before year indicated.
(b) The Schools of Education and Public Health were included in Arts and Sciences until 1957 and 1963, respectively.

TABLE 11

TEACHING LOAD SUMMARY, (Fall Semester 1969)

	Student Cr. Hrs.	Student Contact Hours	No. Courses	No. Secs.	Sr. Hnrs. Sp. Prob.	M.A.	Ph.D.	Spg. Fall SCrH.
FINE ARTS & HUMANITIES:								
Afro-American Studies	318	318	5	5	-	-	-	2.13
Art	5,943	8,361	56	90	18	17	-	1.35
Comparative Lit.	1,347	1,347	14	30	1	-	-	1.39
English	25,147	25,380	76	384	33	13	4	.74
Journalism	600	600	2	4	-	-	-	.46
French	4,599	5,564	26	80	7	1	-	.73
Italian	366	522	7	10	-	-	-	-
Latin/Classics	899	958	11	12	-	-	-	-
German	3,223	3,777	26	74	1	-	1	.72
History	13,386	13,386	57	186	28	-	-	.46
Philosophy	3,873	3,873	15	61	1	-	6	.99
Slavic Languages	753	833	12	18	-	-	-	.76
Spanish	2,824	3,783	22	65	4	-	3	.85
Music	2,727	4,814	52	54	5	-	-	.64
Subtotal	66,005	73,516	381	1,073	98	31	14	.86
SOCIAL & BEHAVIORAL SCIENCES:								
Anthropology	4,132	4,158	18	44	22	5	8	.54
Asian Studies	105	159	4	4	-	-	-	.37
Economics	6,204	6,204	26	96	2	-	13	.93
Government	6,459	6,459	39	101	9	8	26	1.05
Linguistics	252	252	6	7	2	-	1	1.02
Psychology	17,355	20,139	48	171	32	34	37	1.08
Sociology	12,525	12,525	33	108	15	14	14	1.01
Speech	4,569	4,569	15	93	21	3	-	.98
Comm. Disorders	712	712	15	28				
Mass Communications	1,060	1,060	8	17				
Theater	1,639	1,639	16	31				
Subtotal	55,012	57,876	228	700	103	64	99	.99
NATURAL SCIENCES & MATHEMATICS:								
Biochemistry	874	1,002	7	11	12	1	5	.68
Botany	5,075	6,342	15	78	14	18	22	.83
Chemistry	7,455	11,597	28	135	5	11	86	.75
Geology	3,225	4,991	19	68	43	-	-	.62
Geography	567	648	5	16	5	-	-	1.82
Mathematics	16,780	16,940	59	215	3	-	2	.86
Statistics	1,902	1,953	8	15	-	-	-	.90
Microbiology	1,419	1,878	7	15	5	2	28	.77
Physics	4,330	5,174	24	97	14	1	31	.92
Astronomy	3,024	3,953	7	40	16	-	-	.49
Zoology	7,874	12,457	21	134	13	22	29	.91
Subtotal	52,525	66,935	200	824	130	55	203	.83
Honors Program	327	327	6	6	-	-	-	1.49
COLLEGE TOTAL, 1969	173,869	198,654	815	2,603	331	150	316	.90
TOTALS, PREVIOUS YEAR	164,288	184,920	689	2,587	218	154	402	

TABLE 12
STUDENT CREDIT HOURS, FALL, 1964-1969

TABLE 13

FTE STUDENTS BY DEPARTMENT
AND DIVISION (Fall Semester)

	FTE Students			Undergrad.	Graduate
	1967	1968	1969	1969	1969
FINE ARTS & HUMANITIES:					
Afro-American Studies	-	-	21	21	-
Art	290	320	420	369	51
Comparative Literature	15	82	92	88	4
English	1,648	1,723	1,774	1,619	155
Journalism	11	29	15	15	-
French	394	442	327	283	44
Italian	36	33	24	24	-
Latin/Classics	10	25	62	59	3
German	299	290	231	196	35
History	1,112	952	920	861	59
Music	338	214	169	163	6
Philosophy	198	264	270	245	25
Slavic Langs.	65	50	53	46	7
Spanish	257	245	185	169	16
Subtotal	4,673	4,669	4,563	4,158	405
SOCIAL & BEHAVIORAL SCIENCES:					
Anthropology	149	187	285	264	21
Asian Studies	5	4	7	7	-
Economics	378	398	440	384	56
Government	445	482	451	408	43
Linguistics	-	10	19	14	5
Psychology	732	975	1,203	1,105	98
Sociology	615	750	855	812	43
Speech	289	244	305	305	-
Comm. Disorders	43	51	47	41	6
Mass Communication	64	58	71	71	-
Theater	99	116	109	107	2
Subtotal	2,819	3,275	3,792	3,518	274
NATURAL SCIENCES & MATHEMATICS:					
Biochemistry	41	48	63	53	10
Botany	255	308	342	334	8
Chemistry	613	570	533	456	77
Geology	229	229	221	208	13
Geography	21	51	38	38	-
Mathematics	1,096	1,155	1,157	1,075	82
Statistics	167	170	138	113	25
Microbiology	95	117	101	88	13
Physics	298	341	321	252	69
Astronomy	135	137	201	194	7
Zoology	588	640	537	512	25
Subtotal	3,538	3,766	3,652	3,323	329
Honors Program	-	-	22	22	-
COLLEGE TOTAL	11,030	11,710	12,029	11,021	1,008

TABLE 14

STUDENT-TO-FACULTY RATIOS (September 1969)
WITH AND WITHOUT TEACHING ASSISTANTS

	FTE Students*	FTE Fac.*	S/F*	T.A. Equiv.*	F*	S/F*
FINE ARTS & HUMANITIES:						
Afro-American Studies	21	2.5	8.4	-	2.5	8.4
Art	420	25	16.8	4.7	29.7	14.1
Comparative Literature	92	6	15.3	1.3	7.3	12.6
English	1,774	94	18.9	23.3	117.3	15.1
Journalism	15	3.5	4.3	-	3.5	4.3
French	327	29.5	11.1	3.3	32.8	10.0
Italian	24	5	4.8	-	5.0	4.8
Latin/Classics	62	3.5	17.7	-	3.5	17.7
German	231	23	10.0	6.3	29.3	7.9
History	920	50.8	18.1	10.0	60.8	15.1
Music	169	22	7.7	2.7	24.7	6.8
Philosophy	270	15	18.0	3.7	18.7	14.6
Slavic Languages	53	7	7.6	-	7.0	7.6
Spanish	185	22	8.4	3.3	25.3	7.2
Subtotal	4,563	306.8	14.9	58.6	365.4	12.5
SOCIAL & BEHAVIORAL SCIENCES:						
Anthropology	285	10	28.5	2.5	12.5	22.8
Asian Studies	7	1	7.0	.3	1.3	5.4
Economics	440	26	16.9	4.7	30.7	14.3
Government	451	34	14.1(1)	8.0	42.0	11.3(1)
Linguistics	19	3	6.3	1.3	4.3	4.4
Psychology	1,203	40.5	29.8	12.3	52.8	22.8
Sociology	855	24	35.6	10.7	34.7	24.6
Speech	305	21	14.5	4.0	25.0	12.2
Comm. Disorders	41	7	5.9	-	7.0	5.9
Mass Communications	71	5	14.2	-	5.0	14.2
Theater	109	13	8.4	-	13.0	8.4
Subtotal	3,792	184.5	20.8(1)	43.8	228.3	16.7(1)
NATURAL SCIENCES & MATHEMATICS:						
Biochemistry	63	6.5	9.7	2.3	8.8	7.2
Botany	342	18.7	18.3	6.0	24.7	13.8
Chemistry	533	37	14.4	15.7	52.7	10.1
Geology	221	15	14.7	6.0	21.0	10.5
Geography	38	4	9.5	.3	4.3	8.8
Mathematics	1,157	71	16.3	13.0	84.0	13.8
Statistics	138	6	23.0	2.0	8.0	17.3
Microbiology	101	10	10.1	3.0	13.0	7.8
Physics	321	38	8.4	12.3	50.3	6.4
Astronomy	201	8	25.1	2.7	10.7	18.8
Zoology	537	27	19.9	14.3	41.3	13.0
Subtotal	3,652	243.2	15.7	77.6	320.8	11.4
COLLEGE TOTAL	12,007(2)	734.5	16.4(1)	180.0	914.5	13.2(1)

Notes:

* FTE students equal 15 undergraduate student credit hours or 8 graduate student credit hours. S/F is the ratio of the numbers in the two columns to the left. T.A. Equiv. is an arbitrarily chosen figure; $9,000 of teaching assistant funds equals one faculty position. F is column 2 increased by column 4. S/F is the student faculty ratio with teaching assistants included.

(1) Two non-teaching positions in the Bureau of Government discounted for the division.

(2) Twenty-two FTE students in the Honors Program not included.

TABLE 15

STUDENT MAJORS (HEAD COUNT)
BY DEPARTMENT AND DIVISION (Fall Semester)

	Undergraduate			Graduate			Totals		
	1967	1968	1969	1967	1968	1969	1967	1968	196
FINE ARTS & HUMANITIES:									
Art	149	139	208	52	67	69	201	206	2
Bachelor of Fine Arts	34	76	99	-	-	-	34	76	
Music	54	29	46	23	18	24	77	47	
Bachelor of Music	-	34	31	-	-	-	-	34	
Comparative Literature	-	-	-	-	7	10	-	7	
English	1,148	1,038	1,005	217	212	273	1,365	1,250	1,2
Journalism	113	102	99	-	-	-	113	102	
History	687	639	637	117	96	131	804	735	7
Philosophy	61	54	54	44	45	33	105	99	
French(*)	240	188	191	(56)	(48)	76	(296)	(236)	2
German	66	60	42	54	58	64	120	118	1
Italian	-	-	3	-	-	-	-	-	
Latin/Classics	13	14	16	-	24	2	13	38	
Russian	44	30	36	3	3	8	47	33	
Spanish(*)	88	65	86	(20)	(24)	37	(108)	(89)	1
Subtotal	2,697	2,468	2,553	586	602	727	3,283	3,070	3,2
SOCIAL & BEHAVIORAL SCIENCES:									
Anthropology	60	72	98	-	-	36	60	72	1
Economics	155	160	179	68	59	57	223	219	2
Government	548	501	486	87	89	124	635	590	6
Linguistics	-	-	-	-	1	15	-	1	
Psychology	524	539	729	118	125	143	642	664	8
Sociology	362	400	547	65	90	74	427	490	6
Speech	124	153	193	26	35	49	150	188	2
Subtotal	1,773	1,825	2,232	364	399	498	2,137	2,224	2,7
NATURAL SCIENCES & MATHEMATICS:									
Biochemistry	4	24	42	24	26	20	28	50	
Botany	33	31	40	41	47	40	74	78	
Chemistry	212	185	150	132	121	134	344	306	2
Geology	98	94	81	30	38	44	128	132	1
Geography	-	-	-	-	-	-	-	-	-
Mathematics	536	466	450	96	87	86	632	553	5
Statistics	-	-	-	11	13	8	11	13	
Microbiology	76	57	52	34	33	34	110	90	
Physics	85	77	79	88	93	109	173	170	1
Astronomy	31	27	19	1	7	12	32	34	
Zoology	513	444	357	64	73	75	577	517	4
Pre-medical	86	42	41	1	1	-	87	43	
Subtotal	1,674	1,447	1,311	522	539	562	2,196	1,986	1,8
C.A.S.I.A.C.	191	1,118	1,996	-	-	-	191	1,118	1,9
COLLEGE TOTAL	6,335	6,858	8,092	1,472	1,540	1,787	7,807	8,398	9,8

Note:

(*) Figures enclosed in parentheses represent the estimated split of Romance Languages between French and Spanish.

TABLE 16

UPPERCLASS MAJORS BY DEPARTMENT
AND DIVISION (Spring Semester)

	Head Count				Percent of Majors			
	1967	1968	1969	1970	1967	1968	1969	1970
FINE ARTS & HUMANITIES:								
Art	74	80	64	76	2.37	2.98	2.16	2.39
Bachelor of Fine Arts	-	29	61	80	-	.74	2.04	2.41
English	447	541	616	597	19.32	20.08	20.61	17.98
Journalism	43	42	43	50	1.86	1.56	1.44	1.51
French	58	83	78	68	2.53	3.09	2.62	2.05
Italian	-	-	-	1	-	-	-	-
Latin/Classics	2	2	6	11	.09	.07	.20	.33
German	26	32	26	21	1.12	1.41	.87	.63
History	301	331	358	392	13.00	12.31	12.02	11.80
Music	10	5	7	2	.43	.19	.23	.06
Bachelor of Music	-	5	16	27	-	.19	.54	.81
Philosophy	21	31	26	36	.91	1.15	.87	1.08
Slavic Languages	17	30	22	17	.73	.82	.50	.51
Spanish	23	30	22	30	.99	1.11	.74	.90
Subtotal	1,022	1,241	1,345	1,408	44.10	46.10	45.00	42.40
SOCIAL & BEHAVIORAL SCIENCES:								
Anthropology	22	37	43	59	.95	1.23	1.44	1.78
Economics	90	80	129	138	3.88	3.46	4.33	4.15
Government	280	284	269	279	12.09	10.57	9.02	8.40
Psychology	173	233	282	375	7.46	8.96	9.45	11.30
Sociology	143	190	250	362	6.17	7.60	8.48	10.90
Speech	67*	65*	25	24	2.89*	2.56*	.84	.72
Comm. Disorders	-	-	32	44	-	-	1.07	1.38
Mass Communications	-	-	8	29	-	-	.27	.87
Theater	-	-	15	25	-	-	.50	.75
Subtotal	775	889	1,053	1,335	33.40	33.00	35.20	40.20
NATURAL SCIENCES & MATHEMATICS:								
Biochemistry	-	1	10	13	-	.04	.34	.39
Botany	19	14	17	20	.82	.52	.57	.60
Chemistry	59	68	70	62	2.55	2.53	2.34	1.87
Geology	31	46	45	49	1.34	1.71	1.51	1.48
Geography	-	-	-	2	-	-	-	.06
Mathematics	156	158	168	150	6.74	5.87	5.63	4.52
Microbiology	20	28	30	31	.86	1.04	1.01	.93
Physics	19	21	26	31	.82	.78	.87	.93
Astronomy	5	10	9	5	.22	.37	.30	.15
Zoology	110	147	182	155	4.75	5.47	6.10	4.67
Pre-medical	102	70	35	37	4.40	2.60	1.17	1.11
Subtotal	521	563	592	555	22.50	20.90	19.80	16.70
C.A.S.I.A.C.	-	1	-	23	-	.03	-	.69
COLLEGE TOTAL	2,318	2,694	2,990	3,321	100.0	100.0	100.0	100.0

Note:

* Breakdown of figures unavailable before year indicated.

TABLE 17

DEGREES AWARDED

	1967-68	1968-69	1969-70
B. A.	960	1,074	1,208
B. S.	224	278	315
B. F. A.	5	25	34
B. Music	-	-	12
Total Bachelors	1,189	1,377	1,569
M. A.	142	170	158
M. S.	163	97	71
M. F. A.	23	27	20
M. Music	10	1	9
Total Masters	338	295	258
Ph. D.	49 (1)	94 (1)	100 (1)
Grand Total	1,576	1,766	1,927

(1) The breakdown by major departments is shown below:

	1967-68	1968-69	1969-70
Department:			
Anthropology	-	-	1
Biochemistry	2*	4	5*
Biology	1*	-	-
Botany	1	3	5
Chemistry	17	26	18*
Economics	1	2	3
English	3	7	12
French, Italian & Classics	-	-	2*
Geology	1	-	-
German	1	2	2*
Government	4	5	1
History	-	-	3
Mathematics	2	6	6
Microbiology	2	5	2
Philosophy	-	2	1*
Physics	-	3	3
Psychology	10	19	25
Sociology	-	-	5
Zoology	4	6	6*
Total	49	94	100

*One Five-College cooperative Ph. D. is included in each total.

TABLE 17-A

PERCENT OF STUDENTS IN COLLEGE OF ARTS AND SCIENCES WITH CUMULATIVE AVERAGES EQUAL TO OR EXCEEDING SELECTED LEVELS, BY CLASS, AS OF FEBRUARY 1970

	Class of			
Average	1970	1971	1972	1973
4.0	0.1	0.5	0.1	0.6
3.8	0.7	1.2	0.9	2.6
3.6	2.9	2.5	2.4	6.3
3.4	6.2	5.5	6.1	12.0
3.2	11.5	11.5	10.8	20.5
3.0	20.0	18.9	18.8	30.9
2.8	29.9	28.9	28.6	41.9
2.6	42.9	40.3	40.5	52.9
2.4	56.5	53.1	53.3	63.8
2.2	70.1	67.5	65.4	72.6
2.0	83.6	79.3	77.4	79.6
1.8	94.4	89.2	86.6	85.6
1.6	98.8	95.8	92.7	89.1
1.4	99.7	98.1	96.9	92.1
1.2	100.0	99.1	98.7	94.4
1.0	-	99.4	99.5	96.2
Number of students:	1,691	1,979	1,865	2,391

TABLE 18

BOOKS AND MONOGRAPHS, BY DEPARTMENT AND DIVISION (1969-1970)

FINE ARTS AND HUMANITIES

Art:

Coughlin, Jack - Grotesques. Baltimore, Maryland: Aquarius, 1970. 35 pp.

Norton, Paul F. (And Others) - The Arts in America: The Nineteenth Century. New York: Scribner's, 1969. 412 pp.

Reutlinger, Dagmar - Collection of Contemporary Sculptures: catalog of exhibition. Northampton, Massachusetts: Gazette Publishing Co., Inc., 1970. 64 pp.

Walker, Roslyn - African Art: catalog for exhibition. New Haven, Connecticut: Eastern Press Inc., 1970. 108 pp.

Wang, Hui-Ming - The Birds and the Animals: portfolio of wood engravings. Northampton, Massachusetts: Gehenna Press, 1969. 24 pp.

Comparative Literature:

Fleischmann, W. B. ed. - Encyclopedia of World Literature in the Twentieth Century: Volume II (G-N). New York: Frederick Ungar, 1969. 469 pp.

Moebius, C. William - Odes and Elegies. Chicago, Illinois: Alan Swallow, 1969. 57 pp.

English:

Bagg, Robert - Liberations, Three One-Act Plays: The Pope's Right Knee, The Cyclops, Nausicaa. Northampton, Massachusetts: Spiritus Mundi Press, 1969. 88 pp.

Chametzky, Jules ed. (with Sidney Kaplan) - Black and White In American Culture. Amherst, Massachusetts: University of Massachusetts Press, 1969. 400 pp.

Copeland, Thomas - Correspondence of Edmund Burke: Volume VIII. Chicago, Illinois and Cambridge, England, 1969.

Cuomo, George - Sing Choir of Angels: collection of short stories. New York: Doubleday, 1969. 214 pp.

Hunt, J. William - Virgil Forms of Glory: Structure and Sense in Virgil's 'Aeneid'. Carbondale, Illinois: Southern Illinois University Press, 1969. 175 pp.

Junkins, Donald - The Graves of Scotland Parish. Boston, Massachusetts: The Heron Press, 1969. 62 pp.

Kaplan, Sidney ed. (with Jules Chametzky) - Black and White In American Culture. Amherst, Massachusetts: University of Massachusetts Press, 1969. 400 pp.

English (continued):

Kinney, Arthur - On Seven Shakespearean Comedies. Sterling Junction, Massachusetts: Scarab Press, 1969. 48 pp. + 7 illus.

_____ - A Symposium on Love. Boston, Massachusetts: Houghton Mifflin, 1970. 210 pp.

Langland, Joseph - Adlai Stevenson: book of poems. Iowa City, Iowa: Stone Wall Press, 1969. 40 pp.

Mariani, Paul - A Commentary on the Complete Poems of Gerard Manley Hopkins. London, England and Ithaca, New York: Cornell University Press, 1970. 372 pp.

Mayer, Milton - Man vs. The State. Santa Barbara, California: Center for the Study of Democratic Institution, 1969. 191 pp.

_____ - They Thought They Were Free: The Germans 1933-45. Chicago, Illinois: Chicago University Press, 1969. 346 pp.

_____ (with Mortimer J. Adler) - The Revolution in Education. Chicago, Illinois: Chicago University Press, 5th impression, 1970. 215 pp.

_____ - Civil Disobedience, Theory and Practice. New York: Pegasus, 1969. 268 pp.

Politella, Dario - Directory of the College Student Press in America. New York: Oxbridge, 1970. 237 pp.

Weston, John C. - Hugh MacDiarmid's, A Drunk Man Looks at the Thistle. Preston, Lancashire, England: Akros Publications, 1970. 40 pp.

Germanic Languages:

Beekman, E. M. - Homeopathy of the Absurd. The Grotesque in Paul van Ostaijen's Prose. The Hague: Nijhoff, 1970. 205 pp.

Jacoby, F. R. - Van den vos Reinaerde. Legal Elements in a Netherlands Epic of the Thirteenth Century. Munchen, Germany: Fink Verlag, 1970. 116 pp.

Paulsen, W. (with S. J. Kaplowitt, University of Connecticut) - A German Grammar for Review and Reference. New York: Ronald Press, 1970. 265 pp.

_____ ed. - Der Dichter und seine Zeit: Politik im Spiegel der Literatur: The Third Amherst Colloquium. Heidelberg, Germany: Stiehm Verlag, 1970. 220 pp.

Hispanic Languages:

Fernandez-Turienzo, Francisco, translator - W. Correll, El aprender: (from German). Barcelona, Spain: Herder, 1969. 310 pp.

_____, translator - E. Lessing, Las aventuras de Ulises: (from German and Greek). Barcelona, Spain: Herder, 1969. 78 pp.

Hispanic Languages (continued):

_____, translator - K. Rahner, Siervos de Cristo: (from German). Barcelona, Spain: Herder, 1970. 265 pp.

Soons, C. Alan, ed. - Diego Rosel y Fuenllana Obras selectas. Madrid, Spain: Estudios de Hispanofila, 1970. 104 pp.

History:

Greenbaum, Louis - Tallyrand, Statesman Priest. Washington, D.C.: The Catholic University of America Press, Inc., 1970. 293 pp.

Hart, Robert (with Arthur Thompson) - The Uncertain Crusade, America and the Russian Revolution of 1905. Amherst, Massachusetts: University of Massachusetts Press, 1970. 180 pp.

Lewis, Archibald R. - The High Middle Ages, 814-1300. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970. 174 pp.

Richards, Leonard - Gentlemen of Property and Standing. New York: Oxford University Press, 1970. 196 pp.

Wickwire, Franklin and Mary - Cornwallis, the American Adventure. Boston, Massachusetts: Houghton Mifflin Co., 1970. 486 pp.

Philosophy:

Ackerman, Robert - Modern Deductive Logic. Garden City, Long Island, New York: Doubleday and Co., 1970. 261 pp.

_____ - The Philosophy of Science. New York: Pegasus, 1970. 166 pp.

Aune, Bruce - Rationalism, Empiricism, and Pragmatism. New York: Random House, 1970. 210 pp.

Slavic Languages:

Ivask, George ed. - Against the Current: Selections from the Novels, Essays, Notes, and Letters of Konstantin Leontiev. New York: Weybright and Talley, 1970. 286 pp.

_____ - The Egyptian Dove: The Story of a Russian. New York: Weybright and Talley, 1970. 250 pp.

SOCIAL AND BEHAVIORAL SCIENCES

Anthropology:

Fraser, Thomas M. Jr. - Culture and Change in India: The Barpali Experiment. Amherst, Massachusetts: University of Massachusetts Press, 1968 (hardcover), 1969 (paperbound). vi, 460 pp. + 14 plates.

Anthropology (continued):

Proulx, Donald A. - Nasca Gravelots from the Uhle Collection from the Ica Valley, Peru. Amherst, Massachusetts: Research Reports, No. 5, Department of Anthropology, University of Massachusetts, 1970. vi, 103 pp, 33 plates, 2 maps, 1 table, + 1 chart.

Salzmann, Zdenek - Anthropology. New York: Harcourt, Brace, World, 1969. xii, 308 pp.

Economics:

Kane, James A. - Open Space Demand Model. Pittsburg, Pennsylvania: Southwestern Pennsylvania Regional Planning Commission, 1969. 67 pp. + appendix.

Kindahl, James K. (with George J. Stigler) - The Behavior of Industrial Prices. New York: Columbia University Press, for National Bureau of Economic Research, Inc., 1970. xvi, 202 pp.

Government:

Connolly, William E. ed. - The Bias of Pluralism. New York: Atherton, 1969. 261 pp.

Fenton, John H. and Gleason, Gail - Student Power at the University of Massachusetts. Bureau of Government Research, 1969. 71 pp.

Fliess, Peter J. - Freedom of the Press in the German Republic, 1918-1933. New York: Greenwood Press, 1969. 147 pp. (Reprint edition of a book previously published by Louisiana State University Press).

Houn, Franklin W. - Anatomie des chinesichen Kommunismus. Bern and Stuggart: Verlag Hallway, 1969. 336 pp.

Linguistics:

Binnick, Robert I. co-ed. (with Georgia Green, Alice Davison, Jerry L. Morgan) - Papers from the Chicago Linguistic Society 5th Regional Meeting. Chicago, Illinois: University of Chicago Department of Linguistics, 1969. 462 pp.

Freeman, Donald C. ed. - Linguistics and Literary Style. New York: Holt, Rinehart, and Winston, 1970. 394 pp.

Psychology:

Appley, M. H. (guest editor) - The Place of Psychology in the University. American Psychology, 1970, 25, 5. 387-468 pp.

Kanfer, F. H. and Phillips, J. S. - Learning Foundations of Behavior Therapy. New York: Wiley, 1970. 624 pp.

Sociology:

Chevan, Albert and Thomas O. Wilkinson - A Report on Physician Manpower in the Tri-State Region. Boston, Massachusetts: Tri-State Regional Medical Program, 1970. 141 pp.

Sociology (continued):

Park, Peter - Sociology of Tomorrow. New York: Pegasus, 1969. xiii + 181 pp.

Simpson, Jon ed. (with Edward C. McDonagh) - Social Problems: Persistent Challenges, second edition. New York: Holt, Rinehart, and Winston, Inc., 1969. 667 pp.

Tausky, Curt - Work Organizations: Major Theoretical Perspectives. Itasca, Illinois: Peacock Publishers, Inc., 1970. 220 pp.

Speech:

Nober, E. Harris - The Development of Audiologic Criteria to Differentiate Between Auditory Thresholds and Cutile Thresholds of Deaf Children. Washington, D.C.: Department of Health, Education and Welfare, 1970. 215 pp.

Wallace, Karl R. - Understanding Discourse - The Speech Act and Rhetorical Action. Baton Rouge, Louisiana: Louisiana State University Press, 1970. 150 pp.

NATURAL SCIENCE AND MATHEMATICS

Chemistry:

McEwen, W. E., VanderWerf, C. A., and Brewster, R. Q. - Unitized Experiments in Organic Chemistry, 3rd ed. New York: Van Nostrand Reinhold Co., 1970. xv + 287 pp.

Richason, G. R. ed. - Chemistry 101-102 Work Book and Laboratory Manuel. Amherst, Massachusetts: Newell Printing Co., 1969. 210 pp.

_____ ed. - Chemistry 111-112 Work Book and Laboratory Manuel. Amherst, Massachusetts: Newell Printing Co., 1969. 314 pp.

Geology and Geography:

Hafner, J. A. - Transport Development and Geographic Change in Thailand: Research Design and Field Methodology. Bangkok, Thailand: Applied Scientific Research Corporation of Thailand, 1969.

Mathematics:

Foulis, D. J. - Fundamental Concepts of Mathematics. Boston, Massachusetts: Prindle, Weber, and Schmidt, 1969. 212 pp.

Oakland, G. B. - The Art of Consulting (in Statistics). Dubuque: Kendall Hunt Publishing Co., 1969. iii + 141 pp.

Physics:

Byron, F. W. - Mathematics of Classical and Quantum Physics, Volumes I and II. Reading, Massachusetts: Addison-Wesley, 1970. Vol. I, x + 301 pp; Vol. II, xii + 354 pp.

TABLE 19

PAYROLL FROM RESEARCH AND TRAINING GRANTS AND CONTRACTS (Fiscal Years 1969 and 1970)

	1969	1970
FINE ARTS AND HUMANITIES:		
Afro-American Studies	-	-
Art	$ 5,637	$ 4,312
Comparative Literature	192	1,206
English	14,677	37,085
French, Italian and assics	6,920	36,301
Germanic Languages	-	18,899
Hispanic Languages	-	-
History	26,816	12,177
Music	-	1,031
Philosophy	485	16,396
Slavic Languages	-	-
Total	54,727	127,407
SOCIAL AND BEHAVIORAL SCIENCES:		
Anthropology	(a)	$ 1,084
Asian Studies	-	-
Economics	$ 8,540	7,964
Government (b)	28,734	95,062
Linguistics	-	473
Psychology	150,848	279,036
Sociology	37,875(c)	94,397
Speech	5,868	32,445
Total	231,865	510,461
NATURAL SCIENCES AND MATHEMATICS:		
Biochemistry	$ 79,268	$ 87,167
Botany	70,262	95,126
Chemistry	228,444	258,823
Geology and Geography (d)	32,650	62,973
Mathematics and Statistics	52,499	80,193
Microbiology	124,572	165,473
Physics and Astronomy	432,294	569,885
Zoology	182,814	243,229
Total	1,202,803	1,562,869
Grand Total	$1,489,395	$2,200,737

Notes:

(a) A separate total for Anthropology was unavailable as it was included in the Sociology Department's total prior to the split into two departments.
(b) The totals listed represent a combination of the Government Dept. and the Bureau of Government Research.
(c) Includes Anthropology funds, prior to the separation of departments.
(d) Figures represent a combined total for Geology and Geography.

TABLE 20

SELECTED PROFESSIONAL ACTIVITIES OF THE FACULTY

FINE ARTS AND HUMANITIES

Art:

Wozniak, James: President, National Council on Education for Ceramics.

Comparative Literature:

Fleischmann, Wolfgang B.: Editor, American Comparative Literature Association Newsletter.

English:

Emerson, Everett: Editor, Early American Literature.

Frank, Joseph: President, Association of Departments of English.

Gibson, Walker: Chairman, College Section, National Council of Teachers of English.

Hicks, John: Editor, The Massachusetts Review

Kinney, Arthur: Editor, Abstracts of English Studies.

Lowance, Mason Jr.: National Consultant, Office of Education, for Upward Bound Program; 1969-70, University of New Hampshire, St. Michael's College, Gorham State College, Connecticut College, Mount St. Mary's.

Politella, Dario: Editor, The Collegiate Journalist.

Hispanic Languages:

Rothberg, Irving P.: Editor in Chief, Hispania.

History:

Lewis, Archibald: Councillor of the Medieval Academy; Member of Committee for International Exchange of Persons (Fulbright Board).

Music:

Humphrey, Jon: Recitalist and/or soloist in various concerts throughout the east and mid-west.

Kaeser, Fernande M.: Concert tour in Switzerland during the month of January.

Krosnick, Joel: Recitalist in this country while on leave during first semester.

Philosophy:

Matthews, Gareth: Featured symposiast at the American Philosophical Association (Western Division) and invited discussant at the Medieval Studies Conference at Western Michigan University.

SOCIAL AND BEHAVIORAL SCIENCES

Economics:

Kane, James A.: Invited participant, "Conference on Research Problems and Developments in Urban Land Economics and Land Taxation." Lincoln School of Public Finance, Claremont Graduate School, Claremont, California.

Smith, Vernon L.: National Science Foundation Panelist for Evaluation of Research Proposals, Economics Division.

Government:

Beth, Loren: Managing Editor of Polity.

Speech:

Bevilacqua, Vincent: "Visiting Scholar in Rhetoric," Indiana State University at Terre Haute, November, 1969.

NATURAL SCIENCES AND MATHEMATICS

Botany:

Schuster, Rudolph: member of a major expedition to the Antarctic.

Wilce, Robert: Invited Lecturer, dedication, Northeastern University Marine Laboratory.

Chemistry:

Holmes, Robert R.: Invited Paper, Symposium on Fluorinated Organometallic Compounds, Toronto, Canada, May, 1970.

MacKnight, William J.: Invited Paper, Symposium on Polymer Rheology, Prague, Czechoslovakia, September, 1969.

Rausch, Marvin D.: Member, Planning Committee for the Fourth Symposium on Organometallic Chemistry, Bristol, England, August, 1969.

Siggia, Sidney: Chairman, Analytical Division, American Chemical Society, 1969-70.

Stein, Richard S.: Principal Lecturer, Microsymposium on Light Scattering in Polymer Science, Prague, Czechoslovakia, September, 1969.

Geology and Geography:

Hartshorn, Joseph H.: Consultant and Editor, United States Geological Survey and State Geological and Natural History Survey of Connecticut.

Smith, H. T. U.: United States Delegate to the VIII Congress of the International Association for Quaternary Research, Paris.

Mathematics and Statistics:

Cohen, H.: Visiting Lecturer, Mathematical Association of America.

Stone, M. H.: Invited Participant and Lecturer, Second Comprehensive School Mathematics Project International Conference, March, 1970; Visiting Lecturer, University of Islamabad, West Pakistan, December-January, 1970.

Microbiology:

Cox, C. D.: Member, Enviromental Biology Advisory Panel for NASA.

Physics and Astronomy:

Dent, William A.: Member, Scientific Users' Committee, National Radio Astronomy Observatory.

Huguenin, G. Richard: Member, Solar Physics Subcommittee, Space Science and Applications Steering Committee, National Aeronautics and Space Administration; Member, Subcommittee on Radio Astronomy, Committee on Radio Frequency Requirements for Scientific Research Council; Member, Space Astronomy Panel, Astronomy Survey Committee - National Academy of Sciences.

Irvine, William M.: Vice-Chairman, Northeast Radio Observatory Corporation.

Zoology:

Honigberg, Bronislaw M.: Chairman, Plenary Session of 3rd International Congress of Protozoologists, Leningrad, 1969.

APPENDIX B

NEW FACULTY APPOINTMENTS FOR 1970-71

HUMANITIES AND FINE ARTS (51)

W.E.B. DuBois Department of Afro-American Studies (6)

Benjamin, Playthell - Visiting Lecturer: African Literature and History

Attended Florida Agricultural and Mechanical University
Attended Temple University
Extensive research in history of Africans and Afro-Americans
Consultant/Lecturer to colleges and universities throughout the United States

Cole, Johnnetta B. - Associate Professor: Anthropology

B.A. -Oberlin College
M.A. -Northwestern University
Ph.D. -Northwestern University
Assistant Professor, Washington State University
Associate Professor, University of California at Los Angeles

Donaldson, Ivanhoe - Visiting Lecturer: Literature and History of Civil Rights Movement

Attended Michigan State University
Attended Columbia University
Consultant to Park College, University of Michigan, Senate Committee on New Priorities, Cummins Engine Foundation
Lecturer in the United States and several foreign countries

Guellal, Cherif - Visiting Lecturer: Afro-Asian Studies

Attended University of Algiers
Attended University of Aix Marseilles
Algeria's first Ambassador to the United States, Mexico and Canada
Visiting Fellow - Institute for Policy Studies; Adlai Stevenson Institute for International Affairs
Lecturer in India, United Kingdom, and United States

Richards, Josephus O. - Assistant Professor: African Art and Architecture

B.A. -Ahmadu Bello University
M.A. -Northwestern University
Ph.D. -Northwestern University

Terry, Esther A. - Instructor: Introduction to Black Drama
Masterpieces of Black Oratory

B.A. -Bennett College
M.A. -University of North Carolina
Candidate for Ph.D., University of Massachusetts

Art (5)

Davies, Hanlyn - Assistant Professor: Drawing and Painting

N.D.D. and A.T.D. -Swansea College of Art
M.F.A. -Yale School of Art and Architecture
Assistant Professor, University of Vermont

Denny, Walter - Assistant Professor: History of Art

A.B. -Oberlin College
A.M. -Harvard
Ph.D. -Harvard

Dube, Eleanor - Assistant Professor: Painting and Drawing

B.F.A. -Art Institute, Chicago
M.F.A. -Yale

Reed, Carleton L. - Professor: Art Education

B.S. -New York University
M.A. -Columbia University
Diploma -Art School, Pratt Institute
Teacher, Director of Art, Elmira College
Teacher, Pratt Institute
Professor, Coordinator Art Student Teaching, State University at New Paltz, New York
Associate Supervisor of Art Education for New York State
Director of Art Education, Rochester City Schools
Professor, Southern Connecticut State College

Reutlinger, Dagmar E. - Lecturer: Curator of Galleries and Graphies

B.A. and M.A. - Harvard University
Art Gallery Director and owner of arts intempo, International Contemporary Graphies, Amherst
Curatorial Work, Rhode Island School of Design Museum of Art
Curator of slides and photographs, University of Massachusetts

Comparative Literature (1)

Anderson, Warren D. - Professor: Classical Tradition Studies
History of Criticism
Nineteenth Century Literatures

B.A. -Haverford College
B.A., M.A., Ph.D. -Harvard
Instructor to Professor and Chairman, Wooster College
Professor and Chairman, University of Iowa
Phi Beta Kappa

English (14)

Adams, Charles - Instructor: Folklore, American Literature, Medieval Literature

B.A. -Haverford College
M.A. -Indiana University
Candidate for Ph.D. at Indiana University

DiMarco, Vincent J. - Instructor: Chaucer and Medieval English

B.A. -State University of New York at Buffalo
Candidate for Ph.D. at University of Pennsylvania
Phi Beta Kappa

Eidsvik, Charles - Assistant Professor: Film, Contemporary Literature

B.A. -Jamestown College
M.A. -University of South Dakota
Ph.D. -University of Illinois

Farrell, Kirby C. - Instructor: Shakespeare, Renaissance Literature, Modern Drama

B.A. -Clark University
M.A. -Rutgers University
Candidate for Ph.D. at Rutgers University

Harrington, John - Assistant Professor: Freshman Rhetoric, Renaissance Literature, Irish Literature, Film

B.A. -Washington State University
M.A. -Washington State University
Ph.D. -University of Illinois
Phi Beta Kappa

Jayne, Edward - Assistant Professor: History of Literary Criticism, History of English Novel

A.B. and M.A. - University of California at Berkeley
Ph.D. - State University of New York at Buffalo

Louis, John C. - Instructor: Freshman Composition

B.A. -Amherst College
M.A.T. -Yale
Candidate for Ph.D. at Harvard Graduate School of Education

Mewshaw, Michael - Assistant Professor: American Literature, Contemporary Literature Creative Writing

B.A. -University of Maryland
M.A. -University of Virginia
Ph.D. -University of Virginia
Phi Beta Kappa

Ostendorf, Bernhard - Exchange Professor: English and American Literature

Abitur - Gymnasium Antonianum Vechta
Ph.D. - University of Freiburg
Attended Loras College, Dubuque, Iowa
Attended University of Munster
Attended University of Glasgow
Akademischer Rat, University of Freiburg

Robinson, Fred - Instructor: American Literature and Creative Writing

B.A. -University of Redlands
M.A. -University of Washington
Candidate for Ph.D. at University of Washington

Shadoian, Jack - Assistant Professor: Seventeenth Century and Modern English Literature

B.A. -City College of New York
M.A. and Ph.D. - University of Connecticut
Assistant Professor, Pennsylvania State University

Smith, Charles Kay - Instructor: American Literature, 18th Century Criticism

A.B. -Amherst College
Candidate for Ph.D. at Brandeis University

Swados, Harvey - Visiting Professor: Creative Writing

A.B. -University of Michigan
Publications, Relations, and Editorial, various agencies
Visiting Lecturer, State University of Iowa
Language and Literature faculty, Sarah Lawrence College
Visiting Professor, San Francisco State College
Visiting Professor, Columbia University
Lectures and Readings, University of California, Princeton

Wolff, Michael - Professor: Victorian Studies

B.A. and M.A. - St. John's College
Ph.D. - Princeton
Instructor, Assistant Professor, Associate Professor, Professor at Indiana University

French, Italian and Classics (5)

Allard, Marie Aline - Instructor: Renaissance in France, also medieval

B.A., U.B.C. - Vancouver
M.A. - University of California at Berkeley
Candidate for Ph.D. at University of California at Berkeley

Berwald, John P. - Instructor: French pedagogy, i.e. the teaching of French at the high school and elementary level and at the college level

B.A. -University of Michigan
M.A. -Middlebury College
Candidate for Ph.D. at Ohio State University

Carcich, Pierina - Instructor: French and Italian Literature 19th and 20th Centuries

B.A. - Hunter College
Candidate for Ph.D. at Yale

Fata, Frank J. - Assistant Professor: Italian Renaissance and Stylistics

A.B., Columbia College
M.A., Ph.D. - Johns Hopkins University
Assistant Professor, University of Michigan
Director of Italian Study Center at Bologna, City University of New York

Parry, Anne - Associate Professor

B.A. - Vassar College
M.A., Ph.D. - Radcliffe College
Lecturer to Assistant Professor, University of California at Berkeley
Visiting Lecturer, Yale
Associate Professor, Connecticut College
Phi Beta Kappa

Hispanic Languages and Literature (2)

Loureiro, Consuelo M. - Instructor: Portuguese and Spanish Language & Literature

B.A. -Queens College
M.A. -University of California at Berkeley
Candidate for Ph.D. at City University of New York
Phi Beta Kappa

Shakespeare, Dennis K. - Instructor: Spanish Linguistics

B.A. -Brigham Young University
Candidate for Ph.D. at Indiana University

Germanic Languages and Literature (4)

Hugus, Frank R. - Instructor: Danish; philology

B.S. -Pennsylvania State University
M.A. -Pennsylvania State University
Candidate for Ph.D. at University of Chicago

Meid, Volker - Associate Professor: Baroque Literature

Attended Philipps University, Marburg/Lahn
Attended Georg August University, Gottingen
Attended Johann Wolfgang Goethe University, Frankfurt/Main
Ph.D., University of Frankfurt
Assistant at the J.W. Goethe University, Germany
Visiting Professor, University of North Carolina

Von Kries, Friedrich W. - Associate Professor: Medieval Literature

B.A. -University of British Columbia
M.A. -University of Washington
Ph.D. -University of Washington
Assistant Professor, University of Washington

Vordtriede, Werner - Visiting Professor*: Romanticism, Symbolism, Textual Criticism

Attended University of Zurich, Germany, Cambridge University England
Instructor, Princeton
Assistant Professor, Professor, University of Wisconsin
Professor, University of Munich
Visiting Professor, Ohio State
Visiting Professor, Bryn Mawr
Visiting Professor, University of California, Davis

* Fall Semester

History (5)

Bell Hugh F. - Assistant Professor: American Colonial History

A.B. -Princeton
J.D. -University of Michigan Law School
Ph.D. -Cornell University

John, Eric - Visiting Professor: Medieval History

B.A. -University of Manchester, England
M.A. -University of Manchester, England
Assistant Lecturer, Senior Lecturer, University of Manchester

Minear, Richard H. - Associate Professor: Japanese and Far Eastern History

B.A. -Yale
M.A. -Harvard
Ph.D. -Harvard
Assistant Professor, Ohio State University

Swartz, Marvin - Assistant Professor: European Diplomatic History

A.B. -Princeton
M.A -Yale
Ph.D. -Yale
Research Fellow, University of Marburg, Germany
Phi Beta Kappa

White, Robert - Instructor: Brazilian History

B.A. -Haverford College
M.A. -University of Texas
Candidate for Ph.D., University of Texas

Linguistics (4)

Akmajian, Adrian - Assistant Professor: Syntex, Non-Indo-European Languages (Japanese-Chinese)

B.A. -University of Arizona
Ph.D. -Massachusetts Institute of Technology
Phi Beta Kappa

Bevington, Gary L. - Assistant Professor: General Linguistics, Phonological Theory

A.B. -Middlebury College
M.A. -Middlebury College
Ph.D. -University of Massachusetts

Heny, Frank - Assistant Professor: Linguistics Theory, Bantu Linguistics, Semantics

B.A. -Leeds University
Ph.D. -University of California at Los Angeles

Vetter, David C. - Instructor: Mathematical Linguistics, Non-Indo-European Languages, Syntex

B.Sc., -Massachusetts Institute of Technology
Candidate for Ph.D. - Massachusetts Institute of Technology

Philosophy (1)

Chappell, Vere C. - Professor and Head of Department: Philosophy of mind.

B.A. -Yale
M.A. -Yale
Ph.D. -Yale
Instructor, Assistant Professor, Associate Professor, Professor, University of Chicago
Visiting Professor, Indiana University, University of Illino Chicago; University of Illinois, Urbana; Notre Dame University; University of Southern California

Music (3)

Behm, Dennis - Visiting Instructor: Horn and Assistant Band Director

B.A. -University of Iowa
Candidate for M.F.A. at University of Iowa

Harry, William - Lecturer: Piano Technician

Studied piano privately in Holyoke
Music Theory
Studied piano tuning with Mr. Wilfred Denis, Holyoke
Organized own music school in Holyoke
Piano technician and manufacturing with Read & Co., Ivoryton, Connecticut
Piano technician privately employed in Holyoke, also continuing to teach and tune pianos.

Tillis, Frederick C. - Associate Professor: Music Theory and Composition

B.A. -Wiley College
M.A. -University of Iowa
Ph.D. -University of Iowa
Assistant Professor, Associate Professor, Wiley College
Professor, Head of Theory Department, Grambling College
Professor and Head Music Department, Kentucky State College

Slavic Languages and Literature (1)

Ostrorog, Ludmilla - Assistant Professor: Russian Languages and Literature

B.A. -College YMCA, Harbin China
M.A. -Harbin Polytechnic, Harbin, China
Ph.D. -University of Washington
Assistant Professor, University of Texas

SOCIAL AND BEHAVIORAL SCIENCES (45)

Anthropology (3)

Connell, Martha E. - Instructor: Physical Anthropology

B.A. -University of Colorado
M.A. -University of California, Davis
Candidate for Ph.D. at University of California, Davis

Faulkingham, Ralph H. - Assistant Professor: Anthropology

B.A. -Wheaton College
M.A. -Michigan State University
Ph.D. -Michigan State University

Ingersoll, Daniel W., Jr. - Assistant Professor: Anthropology

A.B. -Harvard
Ph.D. -Harvard

Asian Studies (2)

Lee Francis R. - Instructor: Language Teaching and Buddhist Studie

B.A. -University of Tokyo
M.A. -Harvard
Candidate for Ph.D. at Lehigh University

Wang, Ching-hsien - Instructor: Chinese Language, Early Chinese Literature

B.A. -Tunghai University
M.F.A. -University of Iowa
M.A. -University of California at Berkeley
Candidate for Ph.D. at University of California, Berkeley

Economics (6)

Burghardt, Galen D., Jr. - Assistant Professor: Macroeconomic Theo

A.B. and M.A. - University of Washington
Candidate for Ph.D. - University of Washington

Cox, James C. - Assistant Professor: Public Finance, Monetary Theo

B.A. -University of California, Davis
Ph.D. -Harvard
Phi Beta Kappa

Duston, Thomas E. - Instructor: Human Resource Economics, Urban Economics

B.S. -University of Maine
M.A. -State University of New York, Binghamton
Candidate for the Ph.D. at Brown University

Kihlstrom, Richard E. - Visiting Assistant Professor: Economic Theory

B.A. -Purdue University
Ph.D. -University of Minnesota

Muench, Thomas J. - Visiting Associate Professor: Economic Theory, Econometrics

A.B. -Xavier University
Ph.D. -Purdue University
Assistant Professor, Associate Professor, University of Minnesota

Sonnenschein, Hugo - Professor: Economic Theory, Mathematical Economics

A.B. -University of Rochester
M.S. -Purdue University
Ph.D. -Purdue University
Assistant Professor, Associate Professor, University of Minnesota
Visiting Professor, University of Andes
Visiting Scholar, University of Michigan
Visiting Professor, The Pennsylvania State University

Government (3)

Bach, Stanley I. - Instructor: American Government and Politics

B.A. -University of Chicago
M. Phil. - Yale
Candidate for Ph.D., Yale

Einhorn, Eric - Instructor: Comparative/International Government

A.B. -University of Pennsylvania
M.A. -Harvard
Candidate for Ph.D. - Harvard
Phi Beta Kappa

Meo, Leila - Associate Professor: Middle Eastern Politics

B.A. -American University of Cairo, Egypt
M.A. -Syracuse University
Ph.D. -Indiana University
Instructor, Indiana University
Member of Advanced Studies Group, Westinghouse Electric Cor
Free Lance Writer
Journalist

Psychology (14)

Anderson, Daniel - Assistant Professor: Experimental Child Psychology

B.S. -University of Wisconsin
A.M. -Brown University
Ph.D. -Brown University

Brent, Gayle - Research Associate: Psychophysiological measurements.

B.S. -University of Pittsburgh
M.A. -Harvard
Research, child development group at Harvard
Research, Yale

Eichelman, William H. - Assistant Professor: Human Cognitive Proc

B.A. -University of Hartford
M.S. -University of Oregon
Ph.D. -University of Oregon

Fite, Kay - Assistant Professor: Biopsychology

B.S. -Florida State University
M.Sc. -Brown University
Ph.D. -Brown University
Research Associate, Brown University

Golann, Stuart - Associate Professor: Clinical Psychology

B.A. -Queens College
M.A. -University of North Carolina
Ph.D. -University of North Carolina
Supervisory Clinical Psychologist, B.A. Hospital
Chief Investigator, Assistant Professor, Associate Professor at the University of Maryland
Associate Administrative Officer, American Psych. Associatio
Lecturer, Catholic University

Lieberman, Alan J. - Assistant Professor: Clinical Psychology

B.S. -Brooklyn College
M.A. -University of Connecticut
Ph.D. -University of Connecticut
Post Doctoral Fellow, The Menninger Clinic
Chief Psychologist, Berkshire Mental Health Center
Visiting Lecturer, Williams College
Clinical Psychologist, Williams College
Instructor, Bishop Memorial School for Nursing
Consultant, Child Guidance Center, University of Massachusetts
Director of Counseling, Simon's Rock, Great Barrington

Louttit, Richard T. - Professor and Head of Department of Psychology: Physiological Psychology

A.B. -DePauw University
A.M. -University of Michigan
Ph.D. -University of Michigan
Assistant Professor, University of the Pacific
Grants Associate, NIH
Scientist-Administrator, NIMH
Chief, Behavioral Sciences Research Branch, NIMH

Raush, Harold - Professor: Clinical Psychology

A.B. -University of Michigan
M.A. -University of Michigan
Ph.D. -Stanford University
Instructor, Lecturer, Assistant Professor, Professor,
University of Michigan
Chairman, Doctoral Training Program, University of Michigan
Research and Guest Lecturer, University of Oslo, Norway

Reisman, Stephen - Assistant Professor: Social Psychology

B.A. -City College (City University of New York)
M.A. -University of North Carolina
Ph.D. -University of North Carolina

Royer, James - Assistant Professor: Educational Psychology

A.B. -Chico State College, Chico, California
M.A. -University of Illinois
Ph.D. -University of Illinois

Simonson, Norman - Assistant Professor: Clinical Psychology

B.A. -University of Rochester
Ph.D. -Pennsylvania State University
Assistant Professor, Syracuse University

Steiner, Ivan - Professor: Social Psychology

A.B. -Central Michigan College
M.A. -University of Michigan
Ph.D. -University of Michigan
Assistant Professor, Associate Professor, Professor at University of Illinois
Associate Dean of Graduate College, University of Illinois
Head, Division of Social and Differential Psychology, University of Illinois

Todd, David - Instructor: Clinical Psychology

B.A. -Alma College
Candidate for Ph.D. at University of Michigan

Watt, Norman - Associate Professor: Clinical Psychology

B.A. -Northwestern University
M.A. -Ohio State University
Ph.D. -Ohio State University
Postdoctoral research, Swiss Federal Institute of Technology Switzerland
Research Fellow, University Hospital, Gootingen, Germany
Assistant Professor, Lecturer, Harvard

Sociology (5)

Chilton, Roland J. - Associate Professor: Criminology, Methodology and Statistics

B.A. -Monmouth College
M.S. -University of Wisconsin
Ph.D. -Indiana University
Assistant Professor and Associate Professor, Florida State University

Gross, George R. - Instructor: Social Stratification and Introduct Sociology

B.S. -University of Utah
M.A. -University of Massachusetts
Candidate for Ph.D. at University of Massachusetts

Hewitt, John P. - Assistant Professor: Social Psychology, Social Stratification

B.A. -State University of New York, Buffalo
M.A. -Princeton
Ph.D. -Princeton
Assistant Professor, Oberlin College
Assistant Professor, York University
Phi Beta Kappa

Roof, Wade C. - Assistant Professor: Sociology of Religion, Stratification, Race Relations

A.B. -Wofford College
B.D. -Yale University
M.A. -University of North Carolina
Ph.D. -University of North Carolina
Phi Beta Kappa

Stokes, Randall G. - Instructor: Social Psychology, Social Change, Social Problems

B.A. -California State College, San Diego
M.A. -Duke University
Candidate for Ph.D. at Duke University

Speech (12)

Conville, Richard L., Jr. - Assistant Professor: Experimental Rhetor

A.B. -Sanford University
M.A. -Louisiana State University
Ph.D. -Louisiana State University

Craft, Janet - Instructor: Theatre and Oral Interpretation

B.S. -University of Massachusetts
Candidate for M.A.T. at University of Massachusetts

Cronen, Vernon E. - Assistant Professor: Experimental Rhetoric

A.B. -Ripon College
M.A. -University of Illinois
Ph.D. -University of Illinois

Fiala, Jeffrey - Assistant Professor: Scene Design

B.S. -University of Wisconsin
M.F.A. -University of Wisconsin

Hopkins, John W. - Instructor: Technical Theatre

B.F.A. -University of Arizona
M.A. -University of Michigan

Kraus, Sidney - Professor: Mass Communications

B.F.A. -School of the Art Institute of Chicago
M.F.A. -School of the Art Institute of Chicago
Ph.D. -University of Iowa
Lecturer (part-time), DePaul University
Chairman, Mass Communications Program and Assistant Professo
of Radio and Television, Indiana University
Assistant to the President, Roosevelt University
Vice President, Research, and Director, Communicators
Research Center, Daniel J. Edelman and Associates
Vice President, Research and Education Relations, Harshe-
Rotman & Druck, Inc.
President, Sidney Kraus & Associates

LeGrave, Charles W. - Instructor: Rhetoric

B.A. -University of North Dakota
Candidate for M.A. at University of Massachusetts

Lerea, Louis - Lecturer (part-time): Communication Disorders,
Speech Pathology

A.B. -Brooklyn College
M.A. -State University of Iowa
Ph.D. -University of Pittsburgh
Assistant Professor, Associate Professor, Professor and
Head of Speech Department, Northern Illinois University
Phi Beta Kappa

Melrose, Jay - Professor: Speech Pathology

B.A. -Queens College
M.A. -University of Illinois
Ph.D. -University of Illinois
Assistant Professor, Director of Speech and Hearing Clinic,
University of North Dakota
Instructor, Speech and Hearing Therapist, Queens College
Assistant Professor, Emerson College
Lecturer, Boston University
Assistant Professor, Associate Professor, University of Iow

Meyer, Timothy P. - Assistant Professor: Mass Communications

B.A. -Wisconsin State University
M.A. -Ohio University
Ph.D. -Ohio University

Scott, Nicholas J.G. - Assistant Professor: Technical Theater

B.A. -University of California, Santa Barbara
M.A. -University of Iowa
J.D. -University of Iowa
Instructor, Virginia Commonwealth University

Shelby, Maurice - Associate Professor: Mass Communications

A.B. -University of Washington
Ph.D. -Ohio State University
Assistant Professor, Baylor University
Associate Professor and Director R-TV Film, University of Missouri
Phi Beta Kappa

NATURAL SCIENCES AND MATHEMATICS (39)

Biochemistry (1)

Barnes, Dorothy S. - Assistant Professor "A": Enzyme Isolation and characterization

B.S. -University of Massachusetts
M.S. -University of Illinois
Ph.D. -University of Illinois

Botany (7)

Barrett, Paul - Instructor: Ecology

B.Sc. -University of New Hampshire
M.Sc. -University of New Hampshire
Ph.D. -University of British Columbia

Godfrey, Paul J. - Assistant Professor: Ecology

B.S. -University of Connecticut
Ph.D. -Duke University

Harper, John L. - Visiting Professor*: Ecology

Attended Lawrence Sheriff School, Rugby
Ph.D. -Magdalen College, Oxford
University Demonstrator and Lecturer, Oxford
Professor, University College of North Wales
Head of School of Plant Biology, University College of Nort
Wales

Moir, David R. - Visiting Professor: Morphology, Phytogeography

B.Sc. -University of Manitoba
M.Sc. -University of Manitoba
Ph.D. -University of Minnesota
Assistant Professor, Associate Professor, Professor, North Dakota State University
Professor, Chairman of Botany Department, Dean of Science, at Brandon University

Raudzens, Livija - Assistant Professor: Experimental Morphology

B.A. -Barnard College
M.A. -Columbia University
Ph.D. -Columbia University
Instructor, Columbia University

* Fall Semester

Smith, Albert C. - Ray Ethan Torrey Professor: Systematics and Evolution of Higher Plants

A.B. -Columbia College
Ph.D. -Columbia University
Honor Member of National Academy of Sciences

Webster, Peter L. - Assistant Professor: Cytology

B.Sc. -University of St. Andrews
Ph.D. -Western Reserve University
Postdoctoral Research Associate, Brookhaven National Laboratory

Chemistry (5)

Dickinson, Leonard - Assistant Professor: Physical Chemistry

B.A. -Bellarmine College
Ph.D. -University of Wisconsin
Postdoctoral Study - University of Leicester, England

Henneker, William H. - Postdoctoral Research Associate: Research in Atomic and Molecular Absorption

B.Sc. -University of Western Ontario
Ph.D. -McMaster University
Postdoctoral Fellowship, National Research Council of Canada

Hixson, Stephen S. - Assistant Professor: Organic Chemistry (Bio-organic and Photochemistry)

B.A. -University of Pennsylvania
Ph.D. -University of Wisconsin
Postdoctoral, Harvard
Phi Beta Kappa

Uden, Peter C. - Assistant Professor: Analytical Chemistry (separations)

B.S. -University of Bristol
Ph.D. -University of Bristol
Research Associate, Instructor, University of Illinois
Teaching Staff, University of Birmingham, England

Wood, John S. - Associate Professor: Inorganic Chemistry, and X-Ray Crystallography

B.A. -University of Keele, England
Ph.D. -University of Manchester, England
Research Associate, Massachusetts Institute of Technology
Lecturer (Assistant Professor), University of Southampton

Geology & Geography (3)

Haggerty, Stephen E. - Assistant Professor*: Mineralogist and Electron Microprobe Specialist

B.Sc. -Imperial College of Science & Technology, London University
Ph.D. -Imperial College of Science & Technology, London University
Postdoctoral Fellow, Geophysical Laboratory, Carnegie Institution of Washington

Hubert, John F. - Professor: Sedimentary Petrographer and Statistical Geologist

A.B. -Harvard
M.S. -University of Colorado
Ph.D. -Pennsylvania State University
Assistant Professor, Associate Professor, Professor, University of Missouri

Meyer, David R. - Assistant Professor: Urban and Quantitative Geography

B.A. -Concordia Teachers College
M.S. -Southern Illinois University
Ph.D. -University of Chicago

Mathematics & Statistics (11)

Bennett, Mary K. - Assistant Professor: Lattice Theory, Homologic Algebra, Category Theory

B.A. -Albertus Magnus College
M.A. -University of Massachusetts
Ph.D. -University of Massachusetts
Assistant Professor, University of Massachusetts
John Wesley Young Research Instructor, Dartmouth College

Bruns, Gunter - Professor: Lattice Theory

Ph.D. -Free University Berlin, Germany
Habilitation, University of Mainz, Germany
Assistant, Technical University Berlin, Germany
Privatdozent, University of Mainz, Germany
Assistant Professor, Associate Professor, Professor, McMaste University

Chang, Chan-nan - Assistant Professor: Algebra

B.S. -National Taiwan University
Ph.D. -University of Notre Dame

* Fall Semester

Dahiya, Ram C. - Assistant Professor: Statistics

B.A. -Panjab University, India
M.A. -University of Delhi, India
M.S. -University of Wisconsin
Ph.D. -University of Wisconsin

Erle, Dieter - Assistant Professor: Differential and Piecewise Linear Topology

B.A. -University of Bonn, Germany
Ph.D. -University of Bonn, Germany
Scientific Assistant, University of Bonn
Member, Institute of Advanced Study, Princeton

Geman, Donald - Assistant Professor: Probability

B.A. -University of Illinois
Ph.D. -Northwestern University

Gleit, Alan S. - Assistant Professor: Quantum Field Theory

B.A. -Harvard
M.S. -Stanford
Ph.D. -Stanford
Postdoctoral Research Fellow, Carnegie-Mellon University

Kalmbach, Gudrun - Assistant Professor: Topology

Degree in Philosophy & Education, Degree in Mathematics & Chemistry
Ph.D. -University of Gottingen
Instructor and Visiting Lecturer, University of Illinois
Assistant Professor, Pennsylvania State University

Knightly, George H. - Associate Professor: Partial Differential Equations, Applied Mathematics

B.S. -Tufts University
M.S. -Stanford University
Ph.D. -Stanford University
Instructor, Assistant Professor, University of Minnesota
Visiting Assistant Professor, University of Wisconsin

Koch, Robert J. - Professor: Topological Semigroups

B.S. -University of Chicago
M.S. -Tulane University
Ph.D. -Tulane University
Assistant Professor, Associate Professor, Professor, Louisiana State University
Visiting Assistant Professor, Tulane University
Visiting Professor, University of Wisconsin

Schweizer, Berthold - Professor: Probabilistic Metrics

S.B. -Massachusetts Institute of Technology
M.S. -Illinois Institute of Technology
Ph.D. -Illinois Institute of Technology
Instructor, Illinois Institute of Technology
Assistant Professor, San Diego State College
Assistant Professor, University of California, Los Angeles
Associate Professor, Professor, University of Arizona
Associate Professor, University of Massachusetts

Microbiology (1)

Reiner, Albey M. - Assistant Professor: General Microbiology

B.S. -Princeton
M.Sc. -University of Wisconsin
Ph.D -Harvard
Postdoctoral, Hebrew University, Jerusalem, Israel
Postdoctoral, University of California, Berkeley
Phi Beta Kappa

Physics and Astronomy (8)

Chang, Edward S. - Assistant Professor: Theoretical Atomic Physic

B.A. -University of California, Riverside
M.A. -University of California, Riverside
Ph.D. -University of California, Riverside
Resident Research Associate, Goddard Space Flight Center
Research Associate, University of Chicago

Fridovich, Bernard - Visiting Lecturer: Atmospheric and Infra-Red Physics

B.S. -City College of New York
Attended University of Virginia and U.S. Naval Postgraduate School
Ph.D. -University of Maryland
Aeronautical Research Scientist, National Advisory Committee for Aeronautics, Langley Field, Virginia
Aerological Officer, U.S. Navy
Scientific Research Engineer, Republic Aviation Corp.
Physicist, National Environmental Satellite Center, ESSA, Suitland, Maryland

Hallock, Robert B. - Assistant Professor: Experimental Solid State Physics

B.S. -University of Massachusetts
M.S. -Stanford University
Ph.D. -Stanford University
Phi Beta Kappa

Harkness, Richard - Assistant Professor: Radio Astronomy

A.B. -Harvard
Ph.D. -Indiana University
Research Associate, University of Michigan
Research Associate, University of Toronto
Research Associate, Harvard
Research Associate, University of Massachusetts

Lasley, Eric - Research Associate and Lecturer: High Energy Theoretical Physics

B.A. -Carleton College
Ph.D. -Cornell University
Phi Beta Kappa

Meeks, M. Littleton - Visiting Professor: Radio Astronomy

B.S. -Georgia Institute of Technology
M.S. -Georgia Institute of Technology
Ph.D. -Duke University
Assistant Professor, Associate Professor, Georgia Institute of Technology
Research Fellow, Harvard College Observatory
Senior Radio Astronomer, MIT-Lincoln Laboratory

Tucker, Robin W. - Assistant Professor: High Energy Theoretical Physics

B.A. -University of Cambridge, England
M.A. -University of Cambridge, England
Ph.D. -University of Cambridge, England
Research Associate-Lecturer, University of Massachusetts, Amherst

van Blerkom, David J. - Assistant Professor: Astrophysics

B.S. -City College of New York
Ph.D. -University of Colorado
Research Associate and Lecturer, University of Massachusetts
Phi Beta Kappa

Zoology (3)

Kunkel, Joseph G. - Assistant Professor: Developmental Biology

B.A. -Columbia University
Ph.D. -Case Western Reserve University
Postdoctoral, Yale
Lecturer, Yale

Scudo, Francesco M. - Visiting Associate Professor: Mathematical Biology

Degree in Theoretical Physics - University of Padova
Ph.D. -University of Padova
Assistant, Department of Zoology, University of Padova
Researcher, International Laboratory of Genetics and Biophysics, Pavia
Research Associate, Mathematics Department and Medical Schoo
Stanford University

Walkey, Michael - Visiting Associate Professor: Physiology

B.Sc. -King's College, Newcastle-upon-Tyne, England
Ph.D. -Dunelm, University of Glasgow
Assistant Lecturer, Lecturer, Recognized Teacher, Queen Mary College, University of London

A N N U A L R E P O R T

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SCHOOL OF BUSINESS ADMINISTRATION

UNIVERSITY OF MASSACHUSETTS

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ANNUAL REPORT, 1969-1970

SCHOOL OF BUSINESS ADMINISTRATION

UNIVERSITY OF MASSACHUSETTS

WENDELL R. SMITH, DEAN

PREFACE

During the 1969-1970 academic year, the Administrative Committee of the School of Business Administration has developed an updated statement of the goals and activities of the School. The statement is included here as a preface to our Annual Report since it establishes the guidelines that will be followed in our planning for the continued development of the School.

I. GOALS OF THE SCHOOL OF BUSINESS ADMINISTRATION

The activities of the School of Business Administration are directed toward development of the understandings and capabilities necessary for effective management and operation of business firms and other complex organizations in the private, non-profit and governmental sectors of the socio-economic system. The goals of the School can be defined more specifically as they relate to the primary activities of the School--instruction, research, and service.

Instruction (Undergraduate and Masters Levels)

In its moden context, instruction consists of teaching and other activities designed to enable students to learn. Through effective programs of instruction, the School seeks to prepare students for meaningful careers in management and administration. Emphasis is upon building a foundation for the continuing program of learning and development that is essential to effective contribution in an environment characterized by accelerating change.

Instruction (Ph.D. Level)

The objective of the Doctoral Program is to prepare selected students to perform effectively as teachers and/or administrators in dynamic institutions by means of programs designed to build competence in research and learning oriented toward the planning, operation and control of business firms and related complex organizations.

Research

To conduct research related to:

1. The enrichment of instruction in relevant disciplines.
2. Maintaining and enriching the competence of the faculty.
3. Contributing to the development of established and emerging disciplines; and to do this in such ways as to reflect credit to the researcher and to the School.

Service

1. To contribute to the development of close ties between the University and those elements of its constituency that identify with the mission that the School seeks to achieve.

2. To contribute to the general welfare by applying the special capabilities of the School's faculty to the solving of pressing socio-economic problems, specifically to participate fully in programs, such as ABLE, designed to develop minority group students for effective careers in business and related areas of management and administration.

3. To serve the University internally by involvement in its problems of management and administration.

4. To offer continuing education programs designed to maintain and enhance the competence of non-student participants.

II. ACTIVITIES OF THE SCHOOL OF BUSINESS ADMINISTRATION

The activities of the School of Business Administration are directed toward the development of the understanding and capabilities necessary for effective management and operation of business firms and other complex organizations in the private, non-profit and government sectors. The four major activities are instruction, research, publication, and service.

Scholarship underlies all of these activities. Faculty members are assumed to be engaged continuously in study and application of new knowledge in their respective fields. At minimum, they are expected to be familiar with the scholarly work of others in their fields, to discuss this work with colleagues, and to incorporate new knowledge into their courses and programs of instruction.

By one means or another the total faculty input must be blended so as to achieve and maintain excellence in both undergraduate and graduate programs while meeting the School's service responsibilities to the University and the Commonwealth. This blending is difficult. There are potential conflicts among the four activities, particularly as between undergraduate instruction on the one hand and research and publication on the other hand. Instructional activity, as it relates to undergraduate and M.B.A. courses, can easily absorb all of the scholarly input of a faculty member. A faculty member could conceivably devote all of his time to the development of those characteristics associated with excellence in undergraduate instruction. No effective faculty member ever reads as widely or develops as much breadth of scholarship as he would like. However, a School which has committed itself to M.S. and Ph.D. programs must direct part of the scholarly input of the faculty toward research and publication, because these activities are inextricably related to the achievement of excellence in such programs and they must be carried on at such a level as to provide the necessary base to support the size and quality targets of such programs.

Inasmuch as the activities of the School are diverse, the composition of the faculty may also be diverse as long as all faculty members pursue excellence in their activities. Very few faculty members will excel in all four activities even over a lifetime.

There is some logic to the application of the principle of comparative advantage to the allocation and appraisal of faculty. Some faculty may be particularly strong in undergraduate instruction, others may be more effective in the graduate programs. Some may be oriented toward original research. All seek communication of their results in suitable media. Others may be inclined toward and especially capable of conducting short courses or engaging in other service activities. The important thing is that the total collective contribution of the faculty promote excellence in all four activities.

The following guidelines are applicable to the four major activities of the School.

Instruction

1. Challenge and motivate undergraduate and graduate students to excel.
2. Offer courses and programs that are abreast of the most recent knowledge.
3. Encourage students to develop the ability to engage in independent and creative thinking and to obtain knowledge of progress toward professional development in forms that have diagnostic value for self-improvement.
4. Establish a foundation for career-long professional growth and development.

Research

Provide the necessary faculty and support for graduate programs by developing and maintaining:

a. A research environment capable of attracting the number and types of faculty necessary to guide and direct the research efforts of quality graduate students.

b. A research program that will generate financial support adequate to fund research activities associated with the target size of the graduate programs.

Publication

1. Achieve and maintain a flow of scholarly publications sufficient to attract the number and quality of prospective new faculty and graduate students consistent with the target size of the School's graduate programs.

2. Since the University desires to establish itself both nationally and internationally as a first-rate institution of higher learning, all schools and divisions of the University should contribute to this end by encouraging faculty to publish scholarly works within their respective fields.

Service

1. Concentrate upon those service activities which require the special skills and knowledge identified with business faculty and in which business faculty can make unique contributions because of their expertise. Among these services are the following:

   a. Finding solutions to management and administrative problems within the University structure.

   b. Designing and offering continuing education programs in the field of business and administration.

   c. Contributing to the solution of socio-economic problems.

STATISTICAL INFORMATION

1. Appropriation for the Fiscal Year:

Code	1967-1968	1968-1969	1969-1970
03	$21,000.00	$31,600.00*	$29,900.00*
10	8,000.00	10,000.00	8,000.00
12	1,500.00	1,823,77	1,500.00
13	10,750.00	10,000.00	11,000.00
14 (14-1)	10,000.00	12,400.00	12,100.00
15	2,000.00	3,000.00	2,700.00
16	700.00	1,500.00	1,450.00

2. Personnel: Number in Each Rank

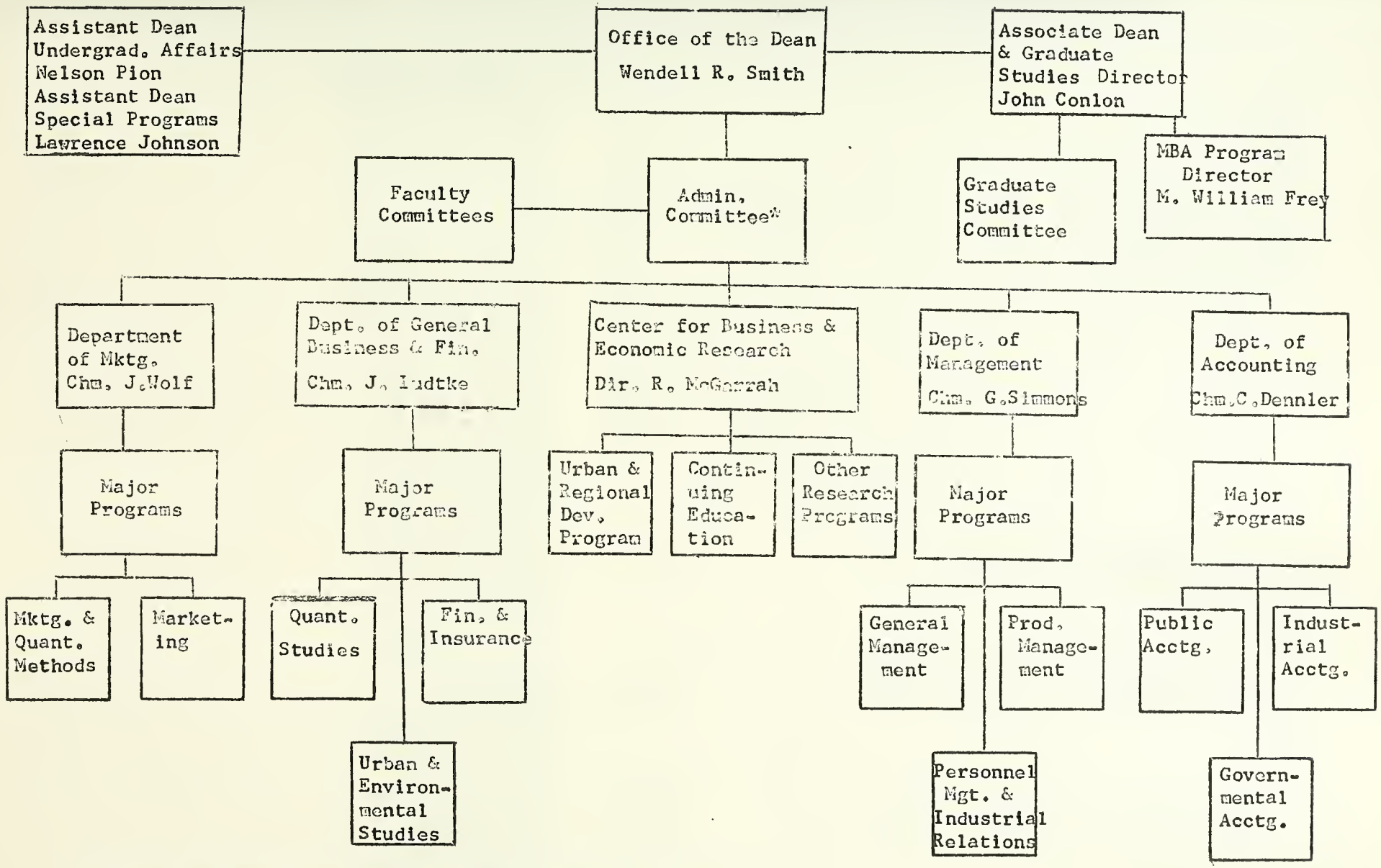
	As of September		
	1967	1968	1969
Professors	12	18	19
Associate Professors	13	18	19
Assistant Professors	21	17	22
Instructors	3	2	4
Lecturer	2	3	3
Total Faculty (excluding Dean)	51	58	67

NOTE: These figures include faculty on leave of absence:

One Professor and One Assistant Professor in 1967.
One Professor, One Associate Professor, and One Assistant Professor in 1968.
One Assistant Professor in 1969.

*Includes special allocations for recruiting and related expenses not included in previous years

Organization Chart, June 1970 School of Business Administration



*Includes the Dean, Associate Dean, Department Chairmen, and Director of the Center for Business & Economic Research.

4. Students Served:

(a) Juniors and Seniors by Major	As of September 1967	1968	1969
Accounting	169	154	170
General Business & Finance	129	164	214
Management	158	199	191
Marketing	152	154	212
Undeclared Juniors*	98	109	154
TOTAL	706	778	941
Sophomores*	344	462	365
Freshmen*	237	325	229
Graduate Students on Campus	137	104	143
TOTAL SBA Students on Campus	1424	1699	1678
Graduate Students at Pittsfield	48	58	35

*Students select majors not later than the end of the first semester of the Junior year. Statistics on Freshmen and Sophomores are not reliable because of frequency of changes in School affiliation.

(b) Number of Students Taught (majors & others--class enrollments)	3250	3891	4485

Our upper division undergraduate and graduate programs have continued to grow in spite of the fact that standards have been raised. Some of the fall off in freshman and sophomore identification with SBA is attributable to an increase in our mathematics requirements necessitated by the growing significance of quantitative analysis in the business disciplines. To date, this has been more than offset by transfers to SBA from the community colleges and from other U. Mass. Schools and Colleges. Additionally, more and more of our management courses are being elected by majors in non-business areas of the University.

ACTIVITIES AND PLANS

5. Faculty Publications, Research Grants, Research Projects and Other Professional Activities

The members of the faculty of the School of Business Administration continue to be highly productive from the point of view of publications and related activities. The record for 1968-69 is as follows:

Articles Published or Accepted for Publication	-- 39
Books Published	-- 12
Books Under Contract	-- 5

This is a conservative view of the publication output of the School. It takes into account only articles appearing in recognized professional or academic journals; and is limited to contributions that have been published, or barring some unforeseen development, will be published. Other manuscripts are in various stages of preparation. Details regarding publications and research are to be found in the department reports which make-up the Appendix of this report.

The faculty of the School of Business Administration continues to become more visible on the State, New England, and National and International scenes. The reports of the departments (Appendicies A through D) provide documentation on this point. My own activities in this area have involved continuing as consultant to the Secretary of Commerce as a member of the Executive Committee of the National Marketing Advisory Committee, participation in several Committee for Economic Development and National Industrial Conference Board Activities, in addition to appearences before business groups in New England and in Japan, Finland, Switzerland, and Italy.

The majority of our senior faculty members, and a growing percentage of our younger men, are well recognized by their own professional groups. Several hold offices in their associations. Professor Litterer is currently President of the Academy of Management and Professor Buell is immediate past President of the American Marketing Association. Many are active on committees of various sorts. Examples are Professors Backer and Morrison in Accounting, Young and Wortman in Management, Paul and Venkatesen in Marketing, and Osborn and Balintfy in General Business and Finance. John Conlon, our Associate Dean, continues to be active in the area of mediation and arbitration of labor disputes. Assistant Dean Lawrence Johnson is much in demand as a speaker before groups, such as the American Management Association, with

reference to problems in providing education and training for the disadvantaged. Bertil Liander has been working closely with New England organizations involved in international business.

The faculty of the School of Business Administration continues to be called upon for substantial participation in University-wide activities. Many are effectively involved in University committees, and several are serving the University as consultants to some of its administrative activities. For example, Ludtke and Backer served as key members of the Senate Budget Committee.

6. Major Accomplishments and 7. Special Programs

Our faculty recruiting activities this year have been successful in most areas. Next Fall we will welcome new faculty members from the Universities of Washington and Wisconsin, Tulane and Yale. We were not successful in finding a qualified candidate for the staff of the Center for Business and Economic Research to assist in its program in urban and regional development. Faculty members of the quality that we have been recruiting properly assume the availability of adequate travel allowances and support services to retain the cutting edge of their professional competence and to make their capabilities fully available to their students and colleagues of the University of Massachusetts. If enhanced levels of support are not forthcoming, we will be disadvantaged from a recruiting point of view, will experience an exodus of highly capable but disillusioned faculty members who have cast their lot with us over the last several years.

During the year, the undergraduate, Masters, and Doctoral Programs of the School of Business Administration were reviewed in some detail. Relatively minor changes were made to up-date the programs to keep them in line with the current requirements of our students. Additionally, a program leading to the degree of Master of Science in Urban and Regional Administration, was developed and submitted for approval.

Program ABLE (Accelerated Business Leadership Education) for disadvantaged MBA candidates, which was developed by Assistant Dean Lawrence Johnson and a sizable group of faculty volunteers, became operational during the first week of June 1969. Experience with the first group of 10 ABLE students has been good, and a second group of 10 is now on campus. The program is funded by industry and by EDA. The same was true of the BEST Program (Business Employment Skills Training) offered in the Springfield area (details of this

On a grant from the New England Regional Commission a group of leaders from four universities, Boston University, Harvard, M.I.T. and U-Mass have initiated a pilot project in international market research. The aim of this project was to stimulate export activity in New England industrial companies.

Bertil Liander of our faculty served as the project coordinator for Western New England. 18 SBA graduate students worked with 17 companies (9 in Massachusetts, 5 in Connecticut, 2 in New Hampshire and 1 in Vermont) on export problems.

Feedback from the companies involved has been excellent.

The School of Business Administration was host to two professional associations which held their Spring meetings on the U. Mass Campus - The Academy of Management and the Teachers of Business Communications. In both instances members of our faculty were responsible for arrangements and programming.

The SBA Business Advisory Council held two meetings, the following new members were appointed:

Saul B. Klaman
E. S. Groo
Donald B. Straus

Membership now stands at 14. (See Appendix F.)

Plans are now being made to host an August conference of the Association for Consumer Research which will bring about 100 of the outstanding scholars in the consumer behavior area to our Campus Center for a two-day workshop.

8. Future Plans and Needs

In my report a year ago, major attention was given to plans for further extension of the MBA Program. Our ability to work more effectively in the expansion of the Masters Programs has been frustrated by the fact that the reduced allocation of travel funds made it impossible for the Director of the Program to visit more than a few campuses for interviewing purposes. It is clear that this is an essential activity if the Program is to become established. Active conversations are now being carried on with other divisions of the University toward the offering of Masters level degrees that would involve our close collaboration. The proposed program for a M.S. in Hotel and Restaurant Administration is an example of what can be done.

I strongly suspect that this section of the reports submitted by most of the Deans will have a common theme. It seems quite clear that the most serious problems on the Amherst Campus of the University of Massachusetts are those having to do with the inadequacy of funds for support activity and for the development of those new programs essential to preventing our activities from falling far behind the parade. While it is clear that the University is obligated to growth in order to provide ever increasing opportunities for the youth of the Commonwealth, somehow it must be understood that this cannot be done unless the secretarial, research, and administrative support that is necessary is made available. At the present time a high percentage of the members of my faculty find it necessary to either type their own correspondence or to have it handled at their own expense outside of the School. Our Department Chairmen spend hours of valuable time in the handling of reports and records that should be handled by an administrative assistant. In my office there are five secretaires who are expected to serve as receptionists and sources of information as well as to support the activities of the Dean, the Associate Dean, the Assistant Deans, and the Director of the MBA Program. This leaves undone many things that are important to the achievement of the development goals of the University.

To a large extent our problem is in the inadequate number of support personnel available, but it is also qualitative. So long as salary scales for non-professional personnel remain at their present low levels, the University will not compete effectively in the market for people to work at jobs much more requiring than is true of the State's system of employment as a whole.

In the near future, the School of Business Administration will be proposing several changes designed to communicate and implement the expanding role that is being played by what have been traditionally called "business schools" across the country. Whereas most of such schools began in the 1920s with an almost exclusive concern with preparing students for business careers, this is no longer the case. Our official accrediting organization, the Association of Collegiate Schools of Business, now identifies the goal of its member institutions as the "Preparation of students for the administration of business firms and other complex organizations." This is to say, as indicated in the preface to this report, that the competence developed in a Collegiate School of Business Administration has increasing applicability to the management of non-profit institutions, educational institutions, and governmental organizations as well as business firms per se.

This evolutionary change in focus, or broadening of focus, is an established fact; but the image of business schools held by the general public and by many students still reflects the older orientation. It is because of this that some of our four year undergraduate schools of business administration are beginning to experience declining enrollments.

Several of the accredited schools in the New England area and elsewhere have responded by a change of name. The School at Boston College, for example, is now officially called the "Graduate School of Management." The same is true of the School at Northwestern, while Ohio State has reorganized as The College of Administrative Science. These changes of name are not without their disadvantages. They tend to suggest to the business community a movement away from the real world needs and problems of the private sector. We will probably recommend a less dramatic change and suggest that our present School of Business Administration be identified at the undergraduate level as the School of Business and Administration and at the Graduate level as the Graduate School of Management and/or Administration.

Attention is also being given to the development of a one-semester freshmen/sophomore course that might carry some such title as "Business and Society." The purpose of this course would be to counter the notion that many students have that the business firm is essentially an anti-social or non-social institution, to analyze it critically in view of the environment of the present and prospective future, and demonstrate the usefulness of management competence in non-business areas. Additionally, such a course would be of use to non-business students who are interested in an objective analysis of how business fits into the social scheme of things. The course would also be helpful to SBA students, who normally have their first contact with the School in the Principles of Accounting course, in enabling them to envision more correctly what the various special fields in business are all about. This could lead to a more effective selection of courses and programs and avoid a great deal of wasted time.

We are also in the process of reviewing our core courses that deal in forthright fashion with the developing interface between business and society, so that when our graduates become active in the business community they will perhaps exert a greater force for social responsibility than is currently the case. I am encouraged to make these changes because the environment oriented courses that we have been offering at the upper division level for some time are extremely popular among students from all over the campus. In this connection we are sorry to be losing Professor Harry Allan

to the Deanship to the School of Business at Syracuse University. His leadership in this particular area has been outstanding. The proposed Master of Science in Urban and Regional Administration and a shortly to be presented proposal for the creation of a Department of Urban and Environmental Studies will further reinforce our commitment to the viewpoints represented above and put us in the vanguard of progressive schools around the country.

Another development that may in time have an effect upon the organizational structure of our School is the development of an operations Research-Management Science Program to be administered jointly by the School of Industrial Engineering and the School of Business Administration. This proposal was an outgrowth of long-standing cooperation between the faculties of the two units. The joint appointment of Professor Balintfy is a further evidence of this development.

Attention is directed to Appendix E, the report of SBA's Center for Business and Economic Research. Given the resources needed, the Center can augment the effectiveness of teaching, research and public service on a campus-wide basis.

In summary, this has been a year of substantial planning for change and development within the School of Business Administration, of concern with developing collaborative arrangements with other Schools and Colleges on the campus and with such internal change as in necessary to fulfill the School's responsibility to our students, the University, and the Commonwealth. A final example of such activity is to be found in our joining forces with the School of Engineering in connection with the ongoing Cooperative Education Program.

My 1968-69 Report dealt at length with the School's space and facilities requirements as we look ahead to the 1970's and 80's. We can report no progress along these lines in that our proposals to date have not been acted upon by the Master Planning Committee. Efforts in this direction will be intensified during the coming year.

A P P E N D I C E S

Grants, Research and

Faculty Activity

(Excerpts Departmental Reports)

Appendix A

Part 1

Department of Accounting, Professor Carl Dennler, Jr. Chairman

This report consists of two parts. Part I will review the major accomplishments of the Department during the year and make recommendations regarding future needs. Part II will list publications, research and other activities of Department members.

Part 1

A. Major accomplishments:

1. The recruitment of two regular faculty, Donald Stone and Martin Gosman, plus the return from leave of Robert Taylor, considerably strengthens the Department both at the Graduate and Undergraduate levels. For the next year this will be a net increase in faculty since one faculty member will be on sabbatical for a year, another will be on sabbatical for one semester, two will be on half-time appointments for one semester, and one instructor resigned unexpectedly.

2. The undergraduate accounting curriculum was revised substantially to allow greater flexibility for students who wish to pursue different career objectives.

3. Financial support by two major accounting firms, Ernst & Ernst and Touche, Ross & Company, continued at the same level as last year. Preliminary discussions with Lybrand, Ross Bros. & Montgomery have resulted in a provisional commitment by them to support SBA library acquisitions.

4. Participation by faculty in programs of regional and national character and appointments of faculty to national committees increased. Three faculty are currently involved in research funded by outside agencies (FEI and NAA).

5. Associate Professor Krzystofik continues as Editor of the Mass. CPA Review, a publication of growing importance. Miss Motekat is the Associate Editor of the Woman's CPA Review and will become Editor within two years. The value of these appointments to the Department and the School is of considerable importance.

6. Curriculum development in system's courses is well underway. This development is an expected result of the addition of John Burch to the staff and should result in more extensive use of computer facilities in all accounting courses.

7. Members of the Department continue to provide professional services to University organizations such as the Associate Alumni, Human Relations Council, Mass. Review, Credit Union, and Faculty Club. In addition to professionally related activities, members of the Department have been appointed to a wide variety of School and University Committees.

8. The Accounting Association, in cooperation with the Department, sponsored an Accounting Careers night as well as other programs during the year. The continued success of the organization is, in part, a reflection of the activities of its faculty advisor.

B. Special Projects or Programs:

1. Three members of the Department participated in the ABLE Program last summer.

2. One member taught in the Pittsfield MBA Program.

3. Two members delivered papers at one-day executive training programs sponsored by the Research Center.

4. A computer-based business game was developed and used on an experimental basis in several Accounting 126 sections.

C. Future Plans and Needs:

1. Departmental recruiting efforts should be directed toward meeting needs in three major areas, listed in order of priority:

(a) Behavioral Science as it relates to accounting;
(b) Graduate level information systems/problems;
(c) Continued better staffing of the Acctg. 125-126 courses.

2. Revision of the M.S. in Accounting program was not completed this year and should be continued next year. The objective will be to make the program less structured.

3. Development and approval of courses in International Accounting and a graduate tax course should be completed by the Spring semester, 1971.

4. Efforts to expand financial support of the accounting program by public accounting firms should be continued.

5. Revision of the Ph.D. courses in Accounting should be undertaken in order to better organize the present coverage and to add dimensions not presently included.

In conclusion, this has been an active and productive year. There appears to be no "unsolvable" problems pending and the staffing of courses for next year, with the possible exception of Accounting 125-126, is completed.

Part 11

Departmental Activities:

Publications:

Articles:

"Financial Reporting and Security Investment Decisions," to be published shortly in The Financial Analysts Journal by Morton Backer.

"Business Games & Simulation Techniques," Management Accounting, December 1969, by John G. Burch.

"Applied Mathematics and Accounting: Commentary on the Psychological Problems of Learning the One and the Intellectual Problems of Renewing the Other," Management Accounting, (a reprint), August, 1969, pp. 29-32, by A. Wayne Corcoran.

"Dollar-Value LIFO Retail Inventory Pricing," Management Services, September-October 1969, pp. 46-53, (with R. Ageloff and R. H. Simpson) by A. Wayne Corcoran.

"The CPA Examination in Accounting Practice" (a reprint), Oklahoma CPA, January, 1970 by Robert W. Lentilhon.

"Is It Rational to Assume Rationality in Business?" The Woman CPA, May 1970, pp. 5-8, by Ula Motekat.

"Women: The Forgotten Minority," Massachusetts CPA Review, May, 1970, by Ula Motekat.

" An Empirical Study of Possible Income Manipulation," The Accounting Review, October 1969, by Richard Simpson.

"Dollar-Value LIFO Retail Inventory Pricing," (with R. Ageloff and A. W. Corcoran), Management Services, Sept-Oct., 1969, pp. 46-53 by R. H. Simpson.

"A System Approach to Teaching the Accounting Process," The Accounting Review, April, 1970, pp. 351-364 by Frank Singer.

"Educational Technology - The Road to Relevance for Business Administration Faculty," Journal of Business, May, 1970, pp. 2-10, by Frank A. Singer.

Books:

Financial Reporting for Credit and Security Investment Decisions, National Association of Accountants, March 1970, 271pp., by Morton Backer.

Chapter 6, "Cash and Funds Flow Reports," Financial Accounting (co-author) by Schrader, Malcolm, Willingham, Richard D. Irwin, 1970, pp. 167-192 by Thomas Morrison.

Reviews:
Fortran manuscript reviewed for Addison-Wesley by John G. Burch.

Other:
Associate Professor Krzystofik continues as Editor of the Mass. CPA Review, and has contributed seven editorials.

Research Grants and/or Projects:

Professor Backer and Associate Professor Simpson have received a grant from the Financial Executives Institute to conduct a study on "Valuation Reporting."

Associate Professor Morrison is currently engaged on research for the NAA on "Financial Controls of International Operations," (started last year).

Assistant Professor James O'Connell has completed 21 semester hours of evening law courses at Western New England College (presently has 39 semester hours cumulative credits toward a J.D. degree).

Assistant Professor Burch is currently working on two books, both dealing with computer-assisted subjects.

Professor Corcoran is presently working on the last chapter of a mathematics-operations research text and has begun work on an accounting text.

Associate Professor Krzystofik is a committee member in charge of scheduling the New England Graduate Accounting Study Conference to be held at UMass., Sept. 9-11, 1970

Professor Singer supervised the collection of data on the quality-point status of students who had transferred to or from SBA within the University. This project was financed by the Dean.
Substantial progress was made with two types of processing of the Robert Morris Associates data tapes and Professor Singer will soon be able to show the capabilities of the Wisconsin program to the SBA faculty.
Professor Singer received $5200 for an 18-month grant from Region 1, Office of Educational Research for development and evaluation of programmed lessons. Professor Singer received a $1,000 grant for the academic year 1969-70 from the Provost's Fund for Instructional Experimentation.

Other Professional Activities:

Papers Delivered:

Professor Backer:
"Financial Reporting for Credit & Security Investment Decisions," Mid-west Regional meetings of the National Association of Accountants.
"Reporting for Diversified Companies," Eastern Regional meetings of American Accounting Association.

"Financial Reporting Problems," Springfield Chamber of Commerce.

Professor Corcoran:
"The Horizons of Accounting," Western New England College, Nov. 19, 1969.

Professor Singer:
"Educational Technology-An Important New Direction for Research by Management Scientists," Institute of Management Sciences, Atlanta, Georgia, Oct. 3, 1969.
Two Instructional Programs demonstrated at the NSPI National meetings, April 29 - May 1, 1970.

National Association Committee Memberships:

Professor Backer is a member of the Committee on Managerial Accounting, American Accounting Association; and Grant in Aid Committee, Research Project Committee, Lybrand Awards Committee of the National Association of Accountants.

Professor Singer is a member of the Advisory Committee to the Director of Education, American Accounting Association.

State Committee Membership:

Associate Professor Krzystofik is a member of the Mass. Society of CPA's Executive Committee and Chairman of its Publications Committee.

Meetings Attended:

Department members attended Northeast Regional meetings of the AAA; Annual AAA Meetings at South Bend, Indiana; National and Eastern Regional meetings of the Convention of American Society of Women Accountants and American Woman's Society of CPA's in Los Angeles and Cleveland; Boston Chapter Meetings of the Institute of Management Sciences and 10th American meeting; NSPI National meetings.

Other:

Assistant Professor Burch conducted three field trips to computer installations for members of his advanced computer course. The students visited the Internal Revenue Service installation at Andover, Mass., and various other facilities in the Springfield area.

Professor Corcoran had two course outlines published:

BA 360/660, Inventory Control. Accounting Trends III: Innovating Accounting Course Outlines, McGraw-Hill, 1969.

Acctg. 385, Application of Mathematics and Statistics in Accounting. Curricula Involving Computers in Collegiate Schools of Business, IBM, 1969.

Associate Professor Krzystofik taught one class on Fund Accounting for Professor Griffiths of the School of Education, UMass.

Professor Backer and Associate Professor Simpson attended a Symposium on "Valuation Reporting" at the University of Kansas, May 21, 22, 1970. This symposium was by invitation only.

Associate Professor Krzystofik participated in a one week pilot program sponsored by the American Accounting Association, "Behavioral Science for Accountants."

Assistant Professor Motekat served as Associate Editor of the Woman's CPA.

APPENDIX B

Department of General Business and Finance, James B. Ludtke, Chairman

Research and Publication:

A. Faculty Research Grants: Abranovic, Belovicz, Deets and Kaczka

B. Faculty Research Projects through the Center for Business and Economic Research: Burak, Plattner, and Rivers were the three major researchers in the Lower Pioneer Valley Regional Planning Commission Project.

C. Many of the other faculty are involved in non-sponsored research.

D. Books: Two books were published this fiscal year by members of the Department.

1. Allan, Harry T. and H. Richard Hartzler, An Introduction to Law: A Functional Approach, Scott-Foresman, Glenview, Illinois, 1969

2. Silver, Isidore, The Law and Economics, Lerner Publications Company, Minneapolis, Minnesota, 1970.

E. Papers presented at Professional Societies:

1. John Bonsignore and Harry Allan presented papers at the American Business Law Association. Bonsignore also spoke at the Midwest Business Law Association.

2. Eugene Kaczka presented a paper at a joint meeting of the American Systems Management Association (Data Processing Management Association and the Lower Connecticut Valley Operations Research Society) and at the Eastern Academy of Management.

F. Articles:

The faculty published or had articles accepted for publication in the following journals and/or book readings: Readings in Financial Management (Barges 3); Journal of Experiemental Social Psychology (Belovicz); Management Science (Cheng); Journal of Finance (Cheng and Deets); Organizational Behavior and Human Performance (Deets); Massachusetts CPA Review (Goldman, Hartzler, Kaczka); Journal of the American Institute of Decision Sciences (Kaczka, 2); Quarterly Review of Economics and Business (Plattner); Journal of Legal Education (Allan)

G. Institutes:

Kaczka is scheduled to attend the Summer Institute for Management Sciences and Operations Research at Boulder, and Ludtke is scheduled to attend two short conferences on pricing and financing in the management of public utilities.

Major Accomplishments:

A. Preparation and submission of a proposal to establish an M.S. Program in Urban Studies.

B. Successful launching of the M.S. Program in Management Science.

C. Development of more effective relationships with the Departments of Mathematics and Industrial Engineering.

D. The Law Group, especially . Richard Hartzler, continues to teach a course for the Department of Public Health and taught all of the law in the Stockbridge School during the spring semester.

E. Further course development in areas of finance, insurance, quantitative studies, and the law.

F. Recruitment of two young Ph.D.'s who show considerable promise and the recruitment of Professor Joseph Balintfy, who has an international reputation in the area of mathematical programming and its application to the area of nutrition.

Special Programs:

The Department did not sponsor any special projects or programs, but many members of the Department participated in special programs sponsored by the School of Business Administration, including Program ABLE, the JET Program, the Lower Pioneer Valley Regional Planning Commission, and 1 to 3-day seminars and conferences.

Resources

Members of the Department have expressed a need for substantial increase in funds to support the research/instructional programs within the Department. For example, Progrssors Cheng and Deets have an immediate need for the University of Chicago Master and Price-Relative Files on magnetic tape, which costs $8,000. Some members of the Law faculty have expressed a need for a much larger input in terms of visual aids, particularly films.

Future additions to the staff will require an increase in office space and secretarial support.

Appendix C

Department of Management, Professor George Simmons, Chairman

Publications

Elliot Carlisle, "Leadership Styles for Foreign Operations," Industrial Relations Quarterly, Accepted for publication.
_____,"Affluence and the Individual," Management of Personnel Quarterly, Fall 1969, pp. 31-34.

Gordon Chen, "Structural Constraints of Organizational Communication Systems," Journal of Business Administration, Accepted for publication.
_____, "Business School Core Curricula," Collegiate News and Views, October 1969, pp. 5-8, (with Edward Zane).

Arthur Elkins, "Greater Springfield's Urban-Industrial University Complex," Industry, May 1970, (with Robert G. McGarrah).

Van Court Hare, Introduction to Computing, Harcourt Brace and World, 1970.
_____, BASIC Programming, Harcourt Brace and World, 1970.

Halsey Jones, "A Study of Organization Performance for Experimental Structures of Two, Three, and Four Levels," Journal of the Academy Management, Sept. 1969, pp. 351-365.

Joseph Litterer, "Research Departments in Large Organizations," California Management Review, Spring 1970, pp. 77-84.

Stephen Michael, Appraising Management Practices and Performances, (Prentice-Hall, 1963) Translated for Japanese edition.

Walter O'Donnell, "Management Development in the Public and Private Sectors: Similarities and Differences," Management International, Spring 1970.

Max Wortman, Emerging Concepts in Management, Macmillan, 1969 (with Fred Luthans)
_____, Labor Relations and Collective Bargaining, Allyn and Bacon, 1969, (with George Wittereid).

Accomplishments

a. During this reporting period the department instituted a major review of curriculum at all levels of instructions. This is being conducted by a committee of Elkins, Bornstein, Litterer, and McGarrah.

b. The department has established a Personnel Policies and Review Committee to make recommendations on all personnel actions, which will be formulated independently from the recommendations of the chairman.

c. Experimentation with lecture and section courses in main service areas (Principles of Management and Personnel Management) has suggested that this method is basically satisfactory and that it may result in an increase in teaching productivity of from two to three times over the traditional method of class assignment.

d. Individual members of the department faculty have worked with others both within and without the School to establish and conduct conferences and training programs for off campus groups.

Future needs

a. The most pressing need of the department at this time is faculty augmentation in two or three sensitive areas, principally production management and organizational behavior - personnel management, and desirably also in business policy. We particularly need at least one, possibly two, new men in production who are trained in newer quantitative methods, and who are capable of carrying on advanced research in these areas. We are, at present, somewhat better prepared to carry on our program in organizational behavior and human relations, but we very much need more depth in the personnel management area, which services not only our own students, but also those from several other areas of the University. Business policy has not been a high priority item in the past; the current inclusion of the subject in the new AACSB core, however, suggests that we should not neglect its development any further.

Appendix D

Department of Marketing, Jack S. Wolf, Chairman

Departmental Accomplishments

a. The implementation of the revised undergraduate marketing program during the previous year has continued to be successful. The limited but concentrated core has provided the intended flexibility for our majors. Student feedback to date reflects satisfaction with the new program although the required course in Marketing Models, a quantitative offering, has met with minor criticism. We expected this reaction until the department receives those Juniors who have completed the five-course sequence in mathematics and statistics required as of September 1969. During the interim instructors in the Models course take the quantitative backgrounds of their students into account.

b. The arrival of Professors Barber, Guiltinan, Paul, and Wiek in September 1969 has strengthened the department's instructional, research and service capabilities materially. The professional activities of these and other departmental faculty are detailed below. The faculty capabilities in the department provide good coverage of the many segments of the field: quantitative methods, buyer behavior, marketing management, international marketing, marketing theory, marketing research, and marketing communications. Victor Buell, formerly Corporate Vice President of American-Standard, Inc., joined the Department at mid-semester. His arrival provides exceptionally good balance especially in the area of marketing management. His expertise will also assist the school as it moves forward in its development of continuing education programs. The Department and the School will benefit materially from his wide circle of business contacts.

c. The Department was awarded $2,000 over the next two years by Stanley Home Products Company. These funds are earmarked for faculty research or to assist in the support of departmental programs. The Mass Retailing Institute continues to provide $1,000 annually for student scholarships. Finally, $1,000 was given to the department by Mr. Roger Richards of the Celenese Corporation as a result of his being honored by the Chemical Market Research Society of America.

d. Sylvania Electric Products Company of New York City arranged an experiment with the Department to use their Marketing Management Simulation. Up to this time no school has had this opportunity to employ this management game. It had been used only in-house and in a national competition sponsored by Michigan State University. Sylvania has pledged its continued use in this School. A final report on format and educational results has been forwarded to Sylvania.

e. Thomas Parkinson, a doctoral student in Marketing, was invited to participate in the Doctoral Consortium sponsored by the American Marketing Association at the University of North Carolina.

f. The Department and the Western Massachusetts Chapter of the American Marketing Association co-sponsored a meeting entitled, "What do students, faculty, and businessmen expect of each other" as a means of enhancing communication between these groups. A panel of businessmen, students and faculty led the open discussion.

g. The entire departmental faculty have shown concern regarding the importance of quality instruction in the introductory course. Planning has been completed that will place all faculty members in the Marketing 201 course commencing Fall, 1970.

Professional Activities of the Faculty

Mary Barber

1. Independent contract research (January-July 15, 1970) on new product planning for the 1970's in the area of household durables. Research design involves the use of professional and consumer panels for determining housewives' evaluation of current household products and appliances, and for developing new product concepts of probable commercial feasibility in the short-term future. Emphasis is placed on exploring the probable impact of changing life styles and current interest in environmental quality control on consumers' values and on their ordering of home-related problems and needs.

2. Continued development of Marketing 201 as an environmentally-oriented introductory course, including the upgrading of instruction, more effective utilization of instructional time, and improving the quality of seminar periods.

Victor Buell

1. Editor-in-Chief, Handbook of Modern Marketing, McGraw-Hill Book Co., to be published September 1970, 120 chapters, 1400 pages

2. Author, "The New Marketing Man," The Arizona Review, June-July, 1969

3. American Marketing Association, Immediate past president, member Board of Directors, Executive Committee, Finance Committee (meetings Chicago, June 18-19, 1970), Chairman, Long Range Planning Committee and Nominating Committee, Attended National Conference, Kansas City, March-April, 1970, Attended Educator's Conference, Cincinnati, August, 1969.

4. American Management Association, Member All-AMA Planning Council

5. Chairman, Conference session, National Industrial Conference Board, Annual Marketing Conference, October, 1969.

6. National Marketing Advisory Committee, U. S. Department of Commerce, member Executive Committee (attended meeting Washington, D. C., September 29-30, 1969, December 4-5, 1969, June 24-25, 1970), member task force to identify long-range national marketing problem areas

7. Editorial Advisory Board, Industrial Marketing magazine

8. Attended eight day IBM Management and Computer Seminar, Endicott, New York, July, 1969

9. Attended Management Sciences Seminar, Wharton School, University of Pennsylvania, September 25-26, 1969

Donald Frederick

1. SBA grant last summer led to two papers; a) A Pricing Decision Using Bayesian Multivariate Analysis, b) Marketing Experimentation Within A Decision Framework
Paper No. 1 submitted to Journal of Marketing Research and accepted for presentation at TIMS annual meeting in Los Angeles in October
Paper No. 2 is near completion

2. Also completed paper, "Information Discounting" and submitted to Operations Research

3. Lecture at U.M.I. graduate marketing seminar on Bayesian Multivariate methods

4. Referee for Journal of American Statistical Association

Joseph Guiltinan

1. "Business Involvement in Problems of Social Concern" with P. Worthing, J. Wiek, and G. Paul, a comprehensive study focusing on the determination of ways in which business firms can and cannot deal successfully with social problems

2. Article in progress "Strategy Alternatives to Market Segmentation and Product Differentiation"

3. Research on Vertical Marketing Networks with J. Wiek, a study focusing on course development and empirical research with the final output expected to include articles and a textbook.

Bertil Liander

1. Organized a seminar for foreign executives in Como, Italy, September 1969. Four members of SBA Staff constituted the faculty. Duration of seminar: one week.

2. Organized a two-day Black Management Symposium at UMass. March 23-24, 1970. Participants from 25 leading American corporations.

3. Coordinator of an export promotion project (together with Boston University, Harvard and MIT) for Western New England. UMass graduate students acted as consultants to 18 New England industrial enterprises. Duration of project: three months, sponsor: New England Regional Commission (grant). February - May, 1970.

4. Organized executive development seminar for Greater Holyoke Chamber of Commerce, May 22, 1970

5. Coordinator of Umass JET Program 1970; 56 foreign executives to participate 1970

6. Organized and developed a survey of Umass faculty interest and involvement in foreign projects, etc., (January, 1970). The result (<500 responses) to be published by the Umass Office of International Programs in 1970

7. Member of Umass Faculty Senate Committee on Foreign Students (Chairman of sub-committee for Financial Aid to Foreign Students)

8. Member Umass "Freiburg Committee"

9. Member of SBA, "BEST" Committee (Continuing Education program for disadvantaged in Springfield, Mass.)

10. Conducted a major location and marketing study in Europe for one of the largest U. S. packaging manufacturing corporations

11. Organized (together with Dr. B. Bur) and developed a survey of faculty's interest and involvement in international studies and projects.

Kent B. Monroe

1. Presented paper on "The Concept of Price Limits and Psychophysical Measurement: A Laboratory Experiment," at the American Marketing Association Educator's Conference, Cincinnati, Ohio, August 27, 1969. The paper will be published in the Conference proceedings - 1970

2. Paper on "The Information Content of Prices: A Preliminary Model for Estimating Buyer Response" accepted for publication in Management Science Application

3. Paper on "The Psychophysics of Prices: A Reappraisal," being revised for re-submission to the Journal of Marketing Research

4. Presented a paper on "Experimental Methods for Determining Price Thresholds" with P. Venkatesan at Pennsylvania State University, February 17-18, 1970

5. Presented a paper on "The Measurement of Price Thresholds," at Renssalear Polytechnic Institute, May 8, 1970

6. Completed data collection on study: "Buyers' Subjective Perceptions of Price."

7. Received faculty research grant for study: "Buyers' Subjective Perceptions of Price"

8. Working on a text on Information Systems Approach to Marketing Research with D. Frederick

Gordon W. Paul

1. Consumer Behavior: An Integrated Approach, Homewood, Richard D. Irwin, Inc., 1970, pp. 548, (with C. Glenn Walters)

2. "A Student Assessment of Selling; Some Exploratory Findings," Southern Journal of Business, April 1970, (with Parker Worthing)

3. "Psychological and Socio-Economic Atypicality of Consumer Panel Members," Proceedings of the American Marketing Association Fall Conference, 1970, (with Ben. M. Enis)

4. Paper given to the Southern Marketing Association Annual Meeting St. Louis, Mo., "Student Attitudes Toward Selling; Some Exploratory Findings"

5. Paper given to Educator's Conference of the American Marketing Association (Title given above) August 26, 1969, Cincinnati

6. Consumer Loyalty Index for Retail Patronage (Research in Progress)

7. Proposal for IRRPOS with Wiek, Guiltinan, Worthing (Research in Progress)

8. Mobility and Purchasing Behavior (Research in Progress)

George Schwartz

1. Principal contributor on various aspects of marketing to the Jefferson Encyclopedia, forthcoming

2. Discussant, consumer decision making session, National Educators Conference of the American Marketing Association, August, 1969

3. Spanish edition of Development of Marketing Theory anticipated in summer of 1969

4. Principal author, in collaboration with other members of the Marketing Department, of "Marketing and the Consumer: Long-Term Issues in an Era of Social Turbulence." This paper was prepared for the National Marketing Advisory Commission of the U. S. Department of Commerce

5. Research activities during the year focussed on the area of marketing and society, involving the collection of materials which hopefully can result in some publication

R. Venkatesan

1. Four publications are in progress--ready to submit to professional journals. (They are; (1) Pricing with K. Monroe, (2) Personality with E. Worthing, (3) Risk with J. Sheth and (4) Learning with J. Sheth).

2. "The Concept of Price Limits and Psychophysical Measurement: A Laboratory Experiment," Proceedings of the American Marketing Association Educator's Conference, Cincinnati, Ohio, (with Kent Monroe)

3. Three books are in press (Consumer Behavior, Experimentation in Marketing and Marketing Research) and a fourth book on Marketing Research is ready for submission to the publisher.

4. Was awarded a Faculty Research Grant from the University of Massachusetts for research in nonmetric scaling--$316.50.

5. Received a research grant for $14,135 from Consumer Research Institute, partly to support the doctoral thesis of T. Parkinson

6. Currently engaged in a research project involving curiosity and disbelievability in advertising--with Professor M. J. Silk of M.I.T.

7. Was a speaker to the doctoral students in marketing at Harvard Business School--October 1969.

8. Was a discussant to a research paper at the A.M.A. Meetings in Cincinnati, Ohio--August 1969.

9. Was an invited participant and speaker at the first Consumer Behavior Workshop, Columbus, Ohio--August 1969.

10. Invited speaker at Penn State Research Program--February 1970.

11. Program Chairman for the first meeting of the Association for Consumer Behavior Research, to be held in Amherst, Mass. in August, 1970.

12. Chairman, Ad hoc Faculty Welfare Committee of the local AAUP Chapter.

13. Now Treasurer, local AAUP Chapter.

14. Involved in Personnel Policies and Review Committee of SBA, Scholarship Committee of the University and the ad hoc committee on doctoral program of the marketing department.

James Wiek

1. Completed Ph.D. Dissertation, "An Analysis of the Relation of Vertical Integration and Selected Attitudes and Behavioral Relationships in Competing Channel Systems," and received Ph.D. degree from Michigan State University.

2. Winner, American Marketing Association Doctoral Dissertation Competition, 1969.

3. Donated consulting services (with J. Guiltinan) to a local businessman regarding his product-mix and market cultivation activities.

4. Participated with a team (Worthing, Paul and Guiltinan) in the development of a research proposal for the National Science Foundation's Interdisciplinary Research Relevant to Problems of our Society (IRRPOS). Our proposal is titled, "Business Participation in Problems of Social Concern."

Parker M. Worthing

1. "A Student Assessment of Selling: Some Exploratory Findings" (with Gordon J. Paul), Southern Journal of Business, April, 1970.

2. "Consumers' Images of Foreign Made Products," (with M. Venkatesan), submitted to Journal of Marketing.

3. "Personality Dimensions and Brand Preferences" (with M. Venkatesan), Data gathered and in final stage of analysis. They anticipate writing two articles relative to this research. One will likely be submitted to the Journal of Marketing Research; another will likely be submitted to the Journal of Applied Psychology.

4. "Buyers' Perceptions of the 'Ideal' Manufacturer--Distributer Marketing Effort." Data gathered and in first stage of analysis. This material, gathered through regional trade associations, complements some earlier research (Worthing's dissertation) and will hopefully be incorporated with earlier research results in a monograph.

5. Preliminary work on the following three projects: "Relationships Between Machiavellianism as a Personality Construct and Selected Organizational Variables" (with Fred Finch). "New Product Perspectives: Conceptual, Empirical and Analytical," a collection of readings. A prospectus relative to this proposed readings book is currently under review by a publisher. "A Selected and Annotated Bibliography on Product Planning, Development and Management." The Michigan State University Bureau of Business Research has indicated a strong interest in publishing this annotated bibliography when it is completed.

6. Guest speaker, Industrial Forum on Product Diversification and Expansion, sponsored by:
Beverly Chamber of Commerce Industrial Council,
Commonwealth Technical Resource Service, University of Massachusetts
North Shore Community College.

ComTech has asked for an article covering the material presented in Worthing's talk to be included in their Timely Topics publication reaching Massachusetts businessmen.

7. Guest Speaker, Westinghouse Air Brake Company, Construction Equipment Division's 1969 Parts Managers' Seminar, Peoria, Illinois.

8. Participant in Ortho Pharmaceutical Corporation's Visiting Professors Converence dealing with corporate efforts to recruit college graduates.

Jack S. Wolf

1. Article entitled, "SYMAP: Computer Graphics for Marketing Management," Journal of Marketing Research, August, 1969.

2. Abstract, Computer Applications Section, (Computer Program Abstract for A Synagraphic Mapping System), Journal of Marketing Research, February, 1970.

3. Reviewer for Addison-Wesley Publishing Company, (review of manuscript of marketing management text by Donald G. Meyer, Loyola University).

4. Reviewer for D. H. Mark Publishing Company, (review of marketing manuscript entitled "The Marketing Concept in Action--An Introduction to Marketing," author unknown.

5. Paper delivered to National Convention National Beer Wholesalers Association entitled "Diversification Ahead--What Planning is Essential?" New York City.

6. Paper delivered and Panel Moderator, National Meeting, Wine Spirits Wholesalers of America, Inc., Session entitled "Suppliers and Wholesalers Look to the 70's" San Francisco, California.

7. Paper delivered to Forest Products Research Society entitled, "Marketing Strategy: Considerations, Snags and Fallacies," Leominster, Massachusetts.

Appendix E

Center for Business and Economic Research, Professor Robert E. McGarrah, Director.

Mission of the Center for Business and Economic Research

The center was established to serve a two fold purpose: first, to enable faculty and students to engage in research, education, and consultation services for administrators of business, industrial, educational, governmental, or health and welfare organizations; second, to provide for organized field-project-experiences so that they might become intregal parts of professional educational programs of the University. In keeping with these efforts to develop opportunities for scholarly and professional contributions, the Center endeavors to coordinate and support initiatives by all faculty and students.

This report is divided into two parts: First, a summary of activities and accomplishments toward improving outreach for extension services by the Center. Second, a summary of on-campus support activities by the Center.

I. Outreach and Extension Activities

Studies for the Lower Pioneer Regional Planning Commission

Professors Burak, Rivers, and Plattner prepared, respectively, the following studies for the Lower Pioneer Regional Planning Commission: (1) Sources and Uses of Public Funds in 43 Towns and Cities Comprising the Regional Planning District; (2) Study of the Economic Base in Thirteen Outlying Communities of the Planning District; (3) Problems and Potentials for Economic Growth and Development in the Planning District. Assisted by several graduate students and supported by staff of the Regional Planning Commission and the Joint Civic Agencies of Greater Springfield, our work on these studies gave us an important information about a wide variety of programs for socio/economic development of our own region.

Business Employment Skills Training Program

Under the direction of Associate Professor S. R. Michael about 15 SBA faculty and graduate students planned and conducted a 40 week 200 class hour course in fundamentals of Business Administration for underemployed Blacks of Greater Springfield. Beginning in May of 1969 class sessions were continued through January 1970, and concluded with a banquet for ten participants who successfully completed requirements of the program. The banquet was held at the UMass Faculty Club in February of 1970.

Planning for Economic Development of Springfield's Central Core

Under agreement with the Springfield Model City Agency, Professor Arthur Elkins developed program proposals for the establishment

of two corporate enterprises to enhance economic development of the Model Neighborhood Area of Greater Springfield. It is anticipated that this proposal will be funded during the summer of 1970, and that the Center will be invited to assist in a joint venture with the Springfield Model Cities Agency and The Greater Springfield Chamber of Commerce to implement proposals and programs for economic development in Springfield's Model Neighborhood Area.

Study of the Economic Impacts of the Nashua River Anti-pollution Program

By invitation from the Massachusetts Department of Commerce and Development and the New England Regional Commission the Center prepared a proposal for U-Mass faculty and students to study the social economic impacts of a $40,000,000 program to clean up the Nashua River Basin. This program involving a half-dozen towns and cities of Massachusetts and New Hampshire would serve as a kind of prototype for other anti-pollution programs almost certainly to be mounted in the near future throughout the U.S. The study would endeavor to identify primary and secondary effects on business, industry, employment, manpower skills, and land usage. In addition, the study would analyze and develop recommendations with respect to regionalized approaches by government agencies of cities, counties, and states toward the achievement of the common purposes of programs for environmental improvement and controls.

Evaluations of State Public Investment Plan

By invitation of the New England Regional Commission, the Center developed and submitted a proposal to analyze, evaluate, classify, and summarize public investment plans prepared and submitted to the New England Regional Commission by each of the six New England States. The purpose of the study would be to provide conclusions and recommendations enabling NERC to increase the effectiveness and reduce redundancies and thus to improve priorities of funds, projects and programs it would support.

Grants and Contracts with Federal Agencies

In April of 1970, the Center retained, under contract, the services of Macro-Systems, Inc. of Silver Springs, Maryland to develop contacts and facilitate arrangements for the Center to engage in grant or contract agreements with various Federal agencies. This retainer agreement is to continue several months into fiscal year '71.

Joint Seminar Greater Holyoke Chamber of Commerce

The Center organized an executive seminar in cooperation with the Greater Holyoke Chamber of Commerce on May 22, 1970. The theme of the seminar was "Saving in a Tight Economic Situation." Arrangements for this seminar were coordinated by Associate Director Liander. Professors: Dennler, Ludtke, Simmons, Wortman, Michael, and Dean Smith presented lectures and led discussions for participants. The sessions were held at the Yankee Peddler Inn in Holyoke, Massachusetts.

Greater Springfield Chamber of Commerce Executive Development Seminar

These seminars are to be held at the Kimbal Towers in Springfield on June 11th, 1970. The theme is "Lower Costs, Greater, Effectiveness In Facing Growing Market Uncertainties." Professors: Backer, Hare, Carlisle, Bornstein, Buell, and Dean Smith will give presentations and lead discussions.

Executive Seminar Como, Italy

Intended primarily for graduates Junior Executives in Training (JET) Program of the University, this seminar was held for the first time in September, 1969. Fifteen participants from Switzerland, Italy and Germany were active in this the first of an annual program. Professors Backer, O'Donnell, Dean Smith and Associate Director Liander participated. A similar venture is in preparation for September 1970 to be held in Switzerland. Professors O'Donnell, Wolf, Dennler, Dean Smith, and Associate Director Liander will participate.

Black Management Symposium

A Black Management Symposium with participation from 25 large American Corporations as well as students from Boston University, Howard, Atlanta University, University of Massachusetts was held on the U-Mass campus in March of 1970. Among the speakers were Jackie Robinson former advisor to Governor Rockefeller and prominent New York businessman; and the Honorable Shirley Chisholm, Democrat, member of the U.S. Congress. The symposium provided opportunities for candid discussions of recruitment, assimulation, placement, promotion, among the ranks of Management. Associate Director Liander and Assistant Dean Johnson planned and coordinated the agenda and administrative aspects of this program.

Rural Community Development Program

By invitation by the Dean of the College of Agriculture, the Director of the Center participated on a committee consisting of field representatives of Federal agencies, (Agriculture, Interior, HUD, HEW) and corresponding agencies or commissions of the Commonwealth of Massachusetts. Participation on this committee may enhance possibilities for the Center to "catalyze" regionalized, consorted efforts of towns and cities to launch urban and environmental improvement programs.

Joint Meeting of the Committee on Intergovernmental Science Relations, Federal Council for Science and Technology, and the Governor's Advisory Committee on Science and Technology, Commonwealth of Massachusetts, Cambridge, Massachusetts

In February, 1970, by invitation from the Chairman of this meeting, the Director of the Center presented a paper describing the purposes and methods of operation of the center for Business and Economic Research. Participants included executives of

federal agencies (DOT, HUD, DOD Commerce, PSAC, NSF) and agencies of state government (GACSAC, CDC, CA) as well as R & D executives of business organizations (ADL, Raytheon, Polaroid).

II. On Campus Activities of the Center
Faculty Student Seminars on Urban and Environmental Improvement.

The purpose of these seminars, which were held weekly again this past year, was to provide opportunities for faculty and students to relate their academic concerns to problems of urban and regional development and environmental improvement. The seminars offered a discussion forum, field contacts for prospective research or consulting projects, and insights to pre-or post-doctoral research projects. During this past academic year, students participated for academic credit, as a part of the requirements for the course BA 700. During the fall, two sessions were devoted to "teach ins" on Viet Nam and the University involvement with policies of military diplomacy. During the spring a series of sessions was developed to shed light on opportunities and challenges for the University to become more involved with urban and environmental quality. The Honorable Frank H. Freedman mayor of the City of Springfield, spoke on "Urban Problems: Challenges to Municipal Government and Higher Education." During the spring, the Center initiated efforts to launch more effective and consorted field work by the Five Colleges on problems of urban and environmental improvement. Finally during the spring, we launched a series concerned with issues of management responsibility for sociological and ecological improvements (e.g. racial integration, environmental quality, consumer health and safety). A detailed list of speakers and topics for the seminar sessions is offered in Exhibit I enclosed with this report.

Support Services

On request of the Faculty Research Advisory Committee and Dean Smith, the Center kept tabs and published summary reports of support services for SBA faculty and students. These services consisted mainly in typing, collating, duplicating and distributing manuscripts of reports and papers, and in recording and processing financial information pursuant to the procurement of materials, equipment, and supplies and services by faculty members engaged in research. The following statistics may serve to indicate the extent of such support services. There were 43 faculty or students for whom manuscripts were typed, collated, or edited; 89 different manuscripts containing 7,490 pages; also there were 24 research accounts kept for 30 faculty, and 259 bookkeeping transactions were involved.

Institute for Man and His Environment

The Director of the Center served on the Steering Committee and Chaired the sub-committee on Outreach for a major proposal for U-Mass to establish an institute for man and his environment under the aegis of the Office of the Graduate School. The pro-

posal for this program was developed over the last academic year. The proposed Institute would serve to coordinate many graduate and undergraduate programs in resident teaching and research and in extension educational services on problems of urban and environmental improvement. The proposed institute is closely related to our proposed SBA Masters' Program on Urban and Regional Administration.

Some Conclusions and Recommendations

At least four times during the past academic year the U-Mass community ceased "business as usual." The Viet Nam Moritoria occurred in October and November 1969. During the spring there were the April 10th and 11th Teach In, Earth Day April 22nd, and finally, the Strike following President Nixon's Cambodia decision. These significant events were all unscheduled. All are signals that "real-world problems" must, somehow be addressed more effectively by the U-Mass community.

The Center for Business and Economic Research has endeavored to catalyze organized efforts of faculty and students who desire and who are qualified to engage on real missions and problems of urban and environmental improvement. As a unit of the School of Business Administration, it seems reasonable for the Center to attempt to exercise initiatives for organizing more widespread cooperation by schools and departments of the University community to engage in missions and problems of urban and environmental improvement

But the Center is but one of many departments attempting to exercise leadership in providing the organized role needed if the University is to be effective in such a service role. The Center and other similar units remain understaffed and underfunded (especially with regard to travel and promotional funds).

Given the background and professional experiences of Dr. Robert Wood, the new U-Mass system President; given the fact that traditional extension services of land grant universities need revitalization enabling the University to help in couping with urban and environmental improvement problems; given that pressures from activist students and faculty for more concrete involvement by the University will be continued: the Center for Business and Economic Research of the School of Business Administration stands as a logical choice as the agency through the University would promote, develop, and provide organized research, education, and consultations concerned with problems of urban and regional development of environmental improvements.

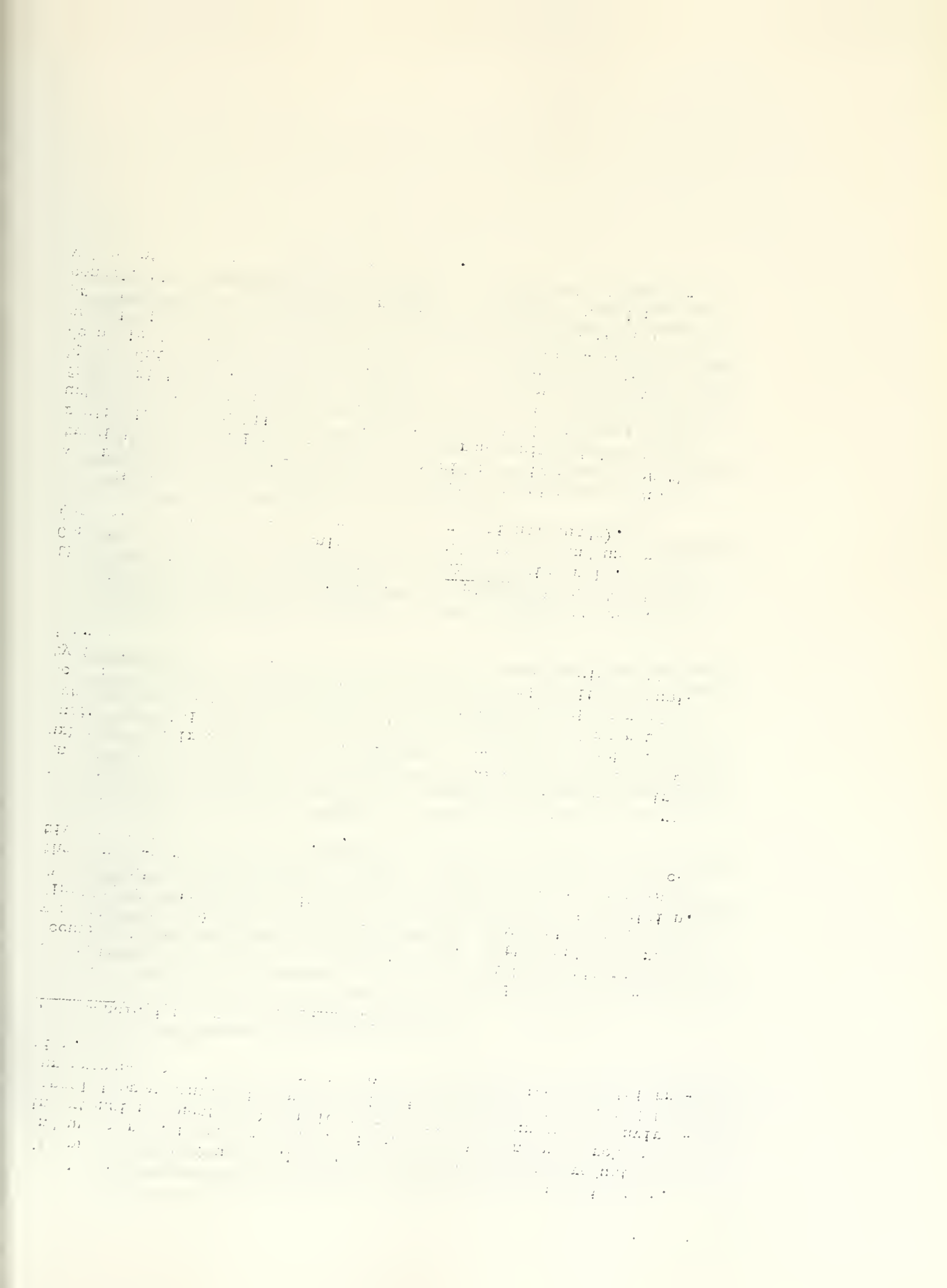


Exhibit I

Grad-Fac Seminars on Urban & Regional Development

8 Oct. '69 "Crises and Breakthroughs on Housing"
Mr. Herbert M. Franklin, Exec. Asst. to Dr. J. Gardner for Housing, Washington, D.C.

15 Oct. '69 "Readjusting National Priorities to Meet Crises of Internal and External Security"
William W. Ford, Brig. General, U.S. Army (Ret.)

29 Oct. '69 "Should the University Go Into the Management Consulting Business?"
Professor Robert E. McGarrah

12 Nov. '69 "U-Mass Program for Improving Environmental Qualities"
Dr. Bernard Berger, Dir., Water Resources Center

4 Dec. '69 "Open Space Demand Model: Recreational Land Planning in Metropolitan Regions"
Professor James Kane, Dept. of Economics

15 Dec. '69 Discussion on "The Philadelphia Plan" for Minority group Employment
Hon. Laurence Silberman, The Solicitor, U.S. Dept. of Labor, Washington, D.C.

17 Dec. '69 "Current Trends in the Administration of the National Labor Laws"
Hon. William Feldesman, Solicitor, National Labor Relations Board, Washington, D.C.

11 Feb. '70 "University Expansion and Housing Supply"
Edward Blackman, Director
Commission on Housing & Education, Roxbury, Mass.

18 Feb. '70 "Economic & Manpower Policies of Canada" (Tackling Inflation in C nada)
Hon. William Dymond, Asst. Deputy Minister of Labor, Government of Canada, Ottawa

25 Feb. '70 "Urban Problems: Challenges to Municipal Government and Higher Education"
Hon. Frank H. Freedman, Mayor, City of Springfield

4 Mar '70 "Proposal for a Five College Field Station in the Greater Springfield Area"
Dr. Robert C. Birney, Dean of Social Sciences
Hampshire College

11 Mar '70 "Proposals: Institute on Man & His Environment"
Dr. Mortimer H. Appley, Dean, Graduate School
Dr. Irving Howards, Professor of Government

18 March '70 "Academic Institutions and Public Environment"
Dr. Andrew Scheffey, Dir., Ctr. for Environmental Studies, Williams College

8 April '70 "Drug Industry Profits"
Dr. Alex Barges, SBA

15 April '70 "Race Problems"
Mr. Vernon Williams, MBA Candidate, ABLE Program
Mr. Thomas Brady, MBA Candidate, ABLE Program

BUSINESS ADVISORY COUNCIL

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ANNUAL REPORT

1970

SCHOOL OF EDUCATION

UNIVERSITY OF MASSACHUSETTS

School of Education
University of Massachusetts
Amherst, Massachusetts

ANNUAL REPORT

1970

SCHOOL OF EDUCATION

UNIVERSITY OF MASSACHUSETTS

Submitted by

DWIGHT W. ALLEN, DEAN

SCHOOL OF EDUCATION

The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF EDUCATION

July 27, 1970

Chancellor Oswald Tippo
Whitmore Administration Building
Amherst, Massachusetts 01002

Dear Chancellor Tippo:

I am pleased to forward the attached Annual Report of the School of Education as part of your data for your Annual Report to the Board of Trustees.

Though the School continues to have growing pains, our progress has been substantial and even dramatic. It is hoped that this Report will provide you with a comprehensive overview of our progress and objectives and will assist you in answering questions about the School as they arise.

Sincerely yours,

Dwight W. Allen, Dean

DWA/tag

ANNUAL REPORT

1970

SCHOOL OF EDUCATION

UNIVERSITY OF MASSACHUSETTS

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REFLECTIONS ON THE SCHOOL OF EDUCATION

Since the fall of 1968, the School of Education has committed its energies to a process of experimentation within both its internal structures and external relationships, a process in which we have found ourselves departing from, and in certain instances challenging, the conventional wisdom embedded in a wide variety of educational practices. We are committed to a course of rational and strategic activism within the field of education. Although we are finding numerous allies around the nation, we are increasingly finding ourselves in the difficult position of being evaluated against standards of excellence based upon assumptions which we do not always hold within the same contexts as others do. We are, first of all, interested in producing a maximum positive impact upon educational thinking, training and practice as they obtain both within our purview as a School of Education and within our reach as concerned professionals aware of the educational crises facing our nation. In choosing such a course, we have had to leave the safe harbors of institutional respectability as that has been traditionally defined; thus we find ourselves attempting to pursue our mission while at the same time justifying our venture within an academic and institutional context which has not often considered such ventures appropriate. Nevertheless, it is apparent to us that the problems in our schools are not going to be remediated at a safe distance, and we have taken it upon ourselves to approach these issues directly.

One of our primary assumptions from the outset--and one to which we remain firmly committed despite the confusion it has inevitably embroiled us in--has been the legitimacy and viability of alternative techniques, programs and strategies within a total educational system. It is our judgment that many of the difficulties facing schools today are in large part due to a

linear commitment to solitary strategies. We are not seeking to find, define and refine the one best way to educate children. The turmoil in our schools and universities indicates to us that students will no longer tolerate a Procrustean system of education. What we seek are demonstrably useful educational alternatives, and, beyond them an overall educational framework which will allow these alternatives to exist within an atmosphere of choice. Our mission is not modest, and we may well fail. Others before us have tried and failed, and 18 months of collective effort have not brought us unqualified successes. Nevertheless, while we continue to seek a variety of successes, we remain committed above all to a full and vigorous process of experimentation and search.

Because of the nature of our efforts, our programs and procedures have taken on a substantially different cast from those typically associated with schools of education. We seek to challenge, for example, the assumption that when students do not succeed in schools it is invariably the students' fault. There may be substantial numbers of individuals for whom the schools as they exist are inappropriate. We may wish to admit into our programs some of these students, so that we may find if there are ways to remediate their performance--either within the current definitions of academic scholarship or within a new framework of scholarship more appropriate to such students. In such instances, we may have to treat these students in ways that most educational institutions have never deemed defensible. And as we work with these students, we may well begin to define standards for their success which do not translate easily into currently defined norms. One of our major difficulties to date has been that of defining our norms while in the midst of exploring those operations to which they will be applied. This situation has produced internal confusion and frustration and no little exasperation among our colleagues elsewhere in the University who would like to know where we are headed. That, unfortunately, is not easy to chart: we are in new waters, and beyond the harbor the waters

are deeper and the charts less numerous. But it is hard to study the flow of the tides without leaving shore.

The first year of the School of Education's new venture was largely an introspective one, in which we attempted to find means of eliminating the unintended parts of our program which might prevent us from gaining the larger perspectives we sought. In that process of redefinition and design, we found ourselves without reliable precedents. In the process of marshalling the resources of people who were sought because their perspectives differed widely, we have found ourselves in the vulnerable position of performing erratically some of the more nominal operations expected of a functioning unit of the University. We have had difficulties counseling our students. We have had difficulties coordinating our programs with those in the field and with other units of the University. The efficiency of our administrative procedures has suffered in the continuing process of redefinition. Even our successes have proved costly. Within the space of two years, our undergraduate enrollment has quadrupled. As a result, courses are oversubscribed and we lack sufficient supervisory personnel to monitor our intern and student-teaching programs. The concept of synergy, it would seem, operates both ways: while we are, hopefully, more than a mere sum of our parts, we are also in some instances less.

Our primary efforts thus far have been directed toward attracting faculty and graduate students whose common enthusiasm and dedication coupled with their widely differing backgrounds and perspectives would provide us with a critical mass of energy and insight; toward creating a viable model of participatory governance within the School which would be seen as an available instrument of change by the members of the School and to which they would also feel accountable; toward the establishment of a network of issue-oriented Centers, whose activities are complementary rather than exclusive, and toward selective involvement in field projects which will give us the opportunities we need to sharpen the focus of our ideas, skills and commitment. We have made

considerable progress in all of these areas. Eleven Centers are now operational, in such fields as international education, innovations in education, teacher education, counseling and human relations, administration and leadership, urban education, aesthetics in education, and a pioneering venture unique in the nation in the field of humanistic education.

By redefining the structure of the School so as to replace traditional departments with Centers, we have attempted to collect our energy around foci which are topical in nature and product-oriented. These Centers differ from departments in two crucial ways: they are temporary (each Center's charter expires in three years unless reasserted and reapproved) and they are non-exclusive in that faculty and students may be members of one or more Centers, or members of no Center at all. All school programs are intended to contribute to our total development at several levels. The Counseling Center, for example, in addition to developing programs to be applied in public schools, is helping us to redefine our own counseling procedures to make them more congruent with our overall objectives. The Center for Research and Evaluation is developing new evaluative strategies to assess existing School programs in our attempt to determine the generalizability of our findings. The Urban Education Center is developing off-campus sites, thus helping to expose our students to the world many of them will later confront. These staging areas are developed in conjunction with the Center for Teacher Education, and we now have student interns in such exploratory programs as the Parkway Program in Philadelphia and the Temple City, California, differentiated staff school district. Likewise, the Centers for Humanistic Education and Counseling and Human Relations are contributing to the total program of the Teacher Education Center by designing and staffing programs which will give our undergraduates experience in self-study and basic human interaction.

One of our most promising and, at the same time, most problematic areas has been that of graduate study. We have been successful in attracting large numbers of graduate students of the very highest caliber, men and women whose

collective wealth of experience has strengthened the total School program. We consider our graduate students members of our instructional staff and we could not function at the same levels of breadth and depth without them. Nevertheless, we have not yet been able to justify within the larger University community the mandate we seek for the legitimacy of credentialing trained activists within the field of education, a mandate which involved the extension of the traditional expectation that the doctorate is conferred primarily for demonstrated excellence in purely research-based activities. The development of standards of rigor which we can justify before more traditionally oriented areas of the academic community remains a large and beckoning task. It is one to which we must address ourselves if the kind of educational leaders we want to produce are to have the freedom to develop beyond the present limits of accepted practice.

In the area of governance we have moved to decentralize much of the power vested in the School's administration, and to recentralize it within the larger School community. By contractual arrangement of a written School Constitution, a School Council has been created to oversee the total governance of the School. Although less than a semester old, the Council has proven itself to be direct and forthright in its assumption of power, and it promises to become a crucial instrument in coordinating the overall activities of the School. The issue of coordination, coupled with that of in-house communication, has proved to be perhaps the most abiding and most serious of those we have yet encountered. Because there are so few binding restrictions at the School, and because there are so many diversely independent people here, these twin issues have become increasingly difficult to resolve as time has gone by. The Dean's role as conceptualizing the School's direction, attracting outside resources and developing off-campus sites delegates to others the performance of necessary but more typical in-house duties of daily administration. He has indicated as much himself through his strong support of the School Council. We are hopeful that the Council, now completing its organization of committees and

procedures, will turn its attention soon to the creation of new vehicles of coordination and communication. It may be, for example, that we will need one full day every week or two for the processing of activities and concerns within the School, rather than waiting as we have for these concerns to either disappear of themselves or move toward crisis.

One of the areas in which coordination has been most sorely lacking--again, paradoxically, because of our success in this area--is that of non-University programs. We have been able to attract twice as much soft-money support from foundation and government grants as we have been alloted in hard-money support; many more top-flight graduate students and faculty than we would otherwise be able to attract, and it has enriched the overall range of our program development. However, the Dean's intentional refusal to set priorities by administrative fiat for these and other commitments, coupled with the School community's reluctance to divert time or energy from its by now normal activities, has deliberately created a situation in which our processes determine our priorities--a situation which, while flexible, has produced difficulties of interface among diverse programs. An example of one unfortunate by-product has been confusion within our undergraduate teacher-education program. The unresolved situation within this major program is apparent to virtually everyone within the School, yet the community has thus far resisted dealing with this issue in a frontal way. The recent appointment of an assistant dean in charge of the coordination of new programs has helped to bring our efforts into sharper focus, but we have yet to tackle the larger internal issues of where we think we want to go and how we expect to get there.

Much more could be written about both our successes and our shortcomings, but perhaps this is sufficient as an introduction. The School of Education has begun to learn just how entrenched and entangled those problems are which we wish to root out of our larger educational system: they exist in the system, in the University and within the School itself. As the above notation of our difficulties might suggest, we are far from claiming victory. Indeed, we are

discovering that we are, individually and collectively, as problematic as those institutions we would like to correct or liberate. Still, we cannot help but feel that our difficulties have become apparent because we have set forces in motion which have begun to encounter considerable resistance, and we interpret this resistance and these difficulties as indicators of our success in moving in the right directions. "Every wall a door," wrote Emerson.

Dwight W. Allen
Dean
School of Education

SCHOOL OF EDUCATION

Future Plans and Needs

I. Facilities

At the present time, members of the staff of the School of Education are working closely with the Planning Office of the University in developing necessary data to initiate the first steps toward a new facility. By early fall, 1970, it is planned that progress will have been made to the point of a feasibility study for a new building or buildings.

In the interim, the extraordinary growth in enrollment in the School has created a severe shortage in available space to house faculty, classes, and activities. The year 1970-1971 will see cramped conditions which will limit the implementation of important educational programs. Hopefully, this situation will be eased somewhat by the availability of new modular space units in September, 1971.

Until a new School of Education building is available, it is hoped that every consideration will be given in assigning some or all space made available by the release of the Goodell Library building to the School. This, of course, would be viewed only as a temporary solution to space requirements.

An additional requirement exists. If the University wishes to continue its association with the Amherst Public School System through its participation in the Marks Meadow Elementary School, consideration must be given to providing facilities comparable to the other elementary schools in the town. To accomplish this, an Instructional Materials Center must

be provided. The Superintendent of Schools and the School Committee have held serious discussions toward this end with the Dean and staff members of the School of Education. The educational needs for such a unit have been well documented.

II. Personnel

As enrollment continues to increase, current programs reach the point of consolidation, and new program thrusts materialize, additional faculty positions are mandatory. There are two basic reasons for this requirement. Firstly, a major effort is currently underway to provide an excellent program for the approximately 900 student teachers and interns who must be trained each year. Meeting the expectations of this large number of students with quality programs demands additional staff.

Secondly, the School of Education is carefully considering new program thrusts in the areas of Special Education, Early Childhood Education, and Vocational Education. At the present time, educational capabilities in these fields do not exist in acceptable dimensions. Yet, the need is clearly there.

As the curricular activities of the School continues to extend beyond the campus, these vital programs bring a greater demand to provide adequate staff. In order to meet current demands and expectations, the present staff resources are being stretched beyond reasonable requirements.

If additional faculty positions cannot be provided to carry out programs at a reasonable level, the alternative is a curtailment of programs for both undergraduates and graduates, and a limitation of enrollment, existing educational programs, and the anticipated development of new programs.

III. Equipment

New equipment, both functional and educational, is required to support both current and additional faculty needs. It is imperative that, beyond the usual requirements of desks, chairs, bookcases, typewriters, and dictation units, television equipment be provided to enable the micro-teaching component of the teacher education endeavor to function at an acceptable and meaningful level. To do this requires a much larger commitment in the budget than exists at this time.

If the move toward computer-assisted instruction is to be realized, there must be a greater commitment in providing the necessary terminals and related equipment and materials.

It must be recognized that lack of space, faculty and equipment will cause these vital programs to falter, or indeed not become reality at all.

ANNUAL REPORT

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

1969-70

Students or Clientele Served

	Sept. '67	Sept. '68	Sept. '69
Undergraduate Majors	919	998	1574
Enrollment (1st Semester)			
Undergraduates	2005	2101	4489
Graduates	761	946	1960
Total Enrollment	2766	3047	6449
Enrollment (2nd Semester)	----		
Undergraduates	----	4224	6000
Graduates	----	1656	3264
Total Enrollment	----	5880	9264

Total Enrollment 1969-70 academic year (Fall and Spring Semester)

Fall U.G. and Grad.	6449
Spring U.G. and Grad.	9264
1969-70 Total Enrollment	15,713

ANNUAL REPORT

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

1969-70

Appropriations--Operational Budget

	Actual 1967-68	Actual 1968-69	Actual 1969-70
03 Services, Non-Employee	$56,313	$120,542	$165,459.13
10 Travel	7,908	11,630	9,000
12 Maintenance	1,908	952	1,968.08
13 Special Supplies	11,765	21,570	13,000
14 Office Expense	4,454	2,793	3,000
14.1 Telephone	9,146	18,002	10,000
15 Equipment		34,502	30,000
16 Rentals			
TOTAL	$91,494	$216,426	$242,427.21

Personnel	September 1967	September 1968	September 1969
Faculty and Administration			
Dean	1	1	1
Assistant Dean		2	3
Professor	3	7	10
Associate Professor	11	15	23
Assistant Professor	10 1/2	16 1/2	16
Lecturer	1	7	10
Instructor	6 1/3	4 1/3	5
Visiting Lecturer	2	1	1
Position Vacancy	3	1	
Total	37	54	69

Other Personnel	September 1967	September 1968	September 1969
Electronic Technicians	2	2	2
Technical Assistant	1	1	1
Principal Clerk	1	1	2
Senior Clerk and Stenographer	1	1	2
Junior Clerk and Stenographer	8	8	7
Senior Clerk and Typist			1
Junior Clerk and Typist		1	3
Total	13	14	18

Projects - Grants - Fellowships
School of Education 1969 - 1970

Project Name	Account Number	Director	Activity Date	Allotment
Applied Research	15-68215	Wolf	9/1/69-8/31/70	$ 27,500.00
CAM-Kettering #642	15-50503	Allen	12/15/67-12/15/60	77,500.00
CAM-Independent School	15-43951	Gorth	4/70-4/71	1,500.00
CAM-Westchester	-43950	Gorth	2/4/70	1,500.00
Center for the Deaf	-69200	Wyman	9/1/69-2/28/70	84,000.00
Clearinghouse	-68308	Allen & Mackin	5/25/70-5/24/71	182,389.00
Compensatory Education		Jordan	5/1/70-6/30/71	1,000.00
Contemporary University-Ford	-48604	Rhodes & Jones	9/3/69-8/31/71	110,000.00
Cooperative College	-87808	Konicek	6/1/69-5/30/70	15,776.00
Cooperative College (Sch. Science)	16-88010	Konicek	1/7/70-6/30/71	27,054.00
Categories of Counselor Behavior		Zimmer	1/69-11/69	8,300.00
CSEI-Globe	11-26663	Sinclair & Eiseman	1/2/70-7/31/70	2,522.00
-Title III	11-26665	Sinclair & Eiseman		1,600.00
-Educational	11-26662	Sinclair & Eiseman	12/5/69-6/30/70	625.00
-Title III Bellows Falls	11-26661	Sinclair & Eiseman	12/10/69-2/27/70	1,000.00
-Montpelier	11-26664	Sinclair & Eiseman	9/5/69-6/1/70	1,140.00
-Keene	11-26660	Sinclair & Eiseman	7/20/69-3/15/70	4,679.00
-Network	13-47400	Sinclair & Eiseman	Open	500.00

Project Name	Account Number	Director	Activity Date	Allotment
Education Training Program-Florida	15-48000	Eve	9/22/69-6/5/70	$ 4,800.00
Education Facilities Model Cities, Lowell	15-51005	Coffing	12/17/69-6/30/70	27,000.00
E.P.D.A.	15-69211	Allen & R. Clark	6/30/70	179,993.00
ESSO Field Teachers	15-48200	D. Day & Konicek	9/1/69-8/31/70	40,145.00
Florida (2)	15-48002	Eve	9/69 & 2/70 payments	7,000.00 5,000.00
Ford Foundation-Adm. Leadership	15-56105	Eve	10/1/69-9/30/70	52,278.00
Headstart Leadership	-69970	D. Day	-4/30/70	228,778.00
Innovation Film Fund	11-32501	D. Allen	continuous	
Institutional Assistant	15-69106	Ulin	-6/71	3 yrs. 26,100.00
Juvenile Delinquency	-70407	Jordan/Dye	6/1/70-11/14/70	25,000.00
Kellog Com. College	08-32600	Lauroesch	11/1/69-6/30/71	51,400.00
Mass. Dept. of Ed.	15-51104	R. Johnson	9/1/69-8/30/70	27,500.00
Mass. Distributive Ed.	-68202	R. Johnson	7/1/69-6/30/70	38,217.00
Mass. Vocational Ed. #0662	-60201	Cyr	7/2/69	14,280.28
Media Spl. - Hearing	-68216	Wyman	6/1/69-8/31/70	32,910.00
Media for Teacher-Handicapped		Wyman	6/1/69-8/31/70	83,972.00
MESPU " Continuation	15-69213	Allen & R. Clark	-5/1/71	50,000.00 216,315.00
METEP	15-68307	Cooper	5/31/69-6/30/70	152,464.00

Project Name	Account Number	Director	Activity Date	Allotment
MITRE Corp. #1	13-51850	Allen/Eve	-9/30/70	$ 15,000.00
MITRE Corp. #2	13-51851	Allen/Eve	1/1/70-6/30/70	15,455.00
New England Dist. Conf.	15-52305	R. Johnson	open	
Office of Education	20-68218	Anderson & Worle	1/15/70-11/15/70	6,834.60
Prospective Teachers-Thelen	15-68213	L. Thelen	6/6/69-8/31/70	29,000.00
Prospective Teachers-Fellowship	15-68214	R. Ulin	-8/31/70	14,100.00
Prospective Teachers-English " " " - Increase	15-69212	Ulin	-7/31/71 -9/30/70	73,680.00 61,600.00 (T-$146,960.)
School of Education Service	08-37100	D. Allen	open	
School of Education-Special Trust	08-37200	D. Allen	-7/1/69	144,032.41
Teacher Corps	15-68306	C. Shepard	-6/30/70	55,182.00
Uganda Project	15-61300	Haviland	8/7/63-6/30/70	839,548.00
Univ. State of NY Mat-Age	15-58202	Wightman	-9/1/69	3,800.00
Westside Study Center		Gentry	6/69-9/69	11,000.00
Categories of CounselorzBehavior	15-68304	Zimmer	12/1/68-10/31/69	6,823.00
Joseph Fels Foundation (WIEE)	-48400	Thelen	7/1/70-12/30/70	8,079.00

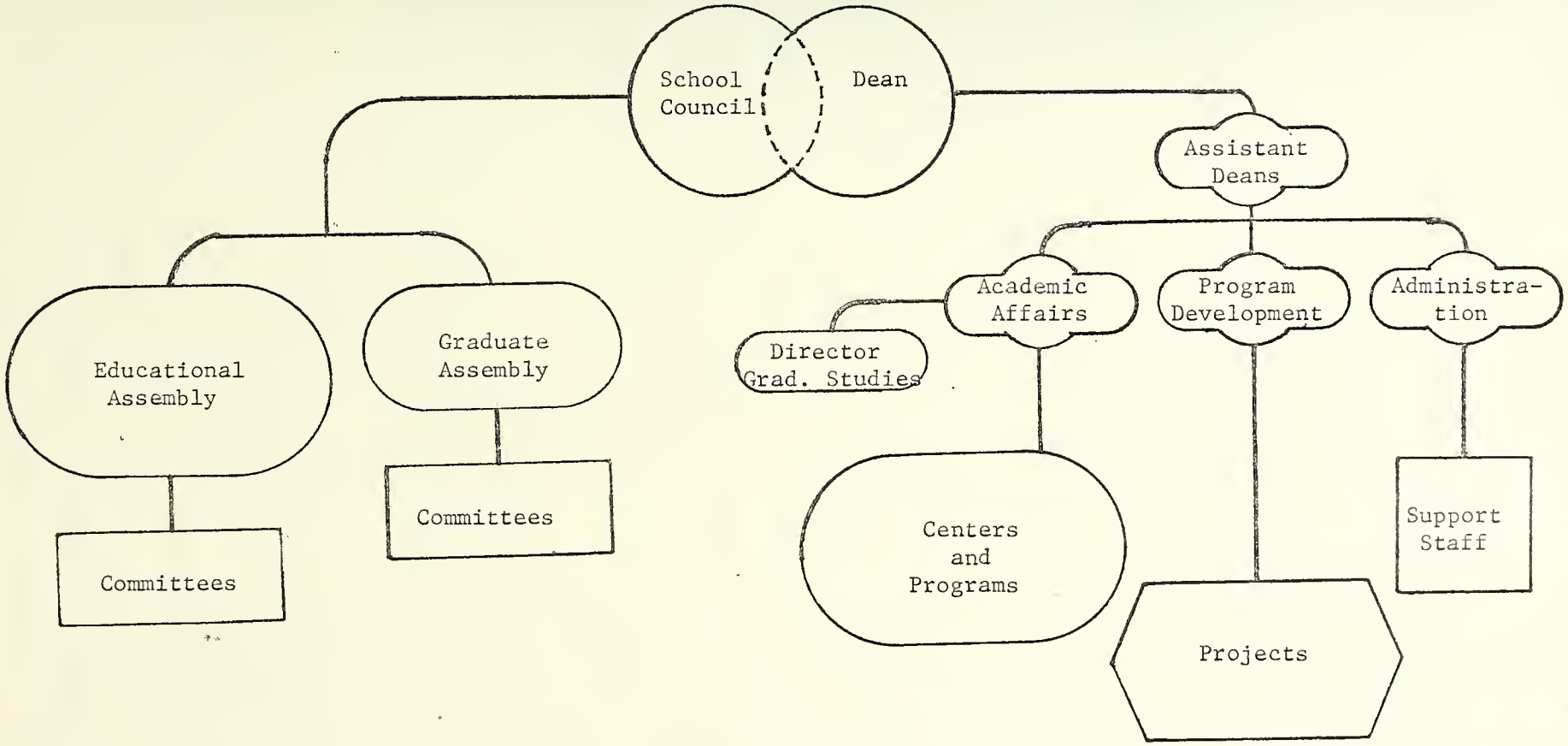
00.00$

3/32.5

27999

Deferred 0 Earned 1000 Used

ORGANIZATIONAL CHART



GOVERNANCE

During the past three years, the School of Education has experienced three different forms of governance. Prior to 1968, the School was governed in a traditional manner, similar to most state universities--power was centralized in the administration, and the faculty advised the Dean in matters of curriculum and personnel. During the 1968-69 year, an educational revolution occurred with the appointment of a new Dean, over thirty new faculty, and more than seventy-five doctoral students who were brought into all phases of school governance as equal participants. After an extraordinary year under a modified form of participatory democracy, a third phase was developed--governance under a Constitution which tried to find a middle ground between participatory democracy and traditional oligarchic rule.

When it became clear to the majority of faculty and students that participatory democracy was not viable for the school, a Constitution Committee was established to explore alternative forms of governance that have been tried at various major universities and schools, to determine what forms had been successful and why, and what in the experience of others would be relevant at the University of Massachusetts. The Committee explored dozens of books, pamphlets and articles concerning the widely publicized student revolts around the community student and faculty participation in governance, University administration, and similar topics. Yet this research was of surprisingly little help to the Committee.

There was ample material on administrative theory, multiple faculty committee reports and recommendations on University reform, and on the aims and ideals of higher education, plus detailed dissertations on specific aspects of University administration (such as whether department chairman are chosen or elected, or on procedures for appeal in personnel matters). But the Committee found no relevant accounts that traced particular models of governance from

conception through implementation and evaluation. With this type of information we might have built on the experience of the past and learned from the mistakes and successes of others. Because such information was not available, we relied on general principles, partial accounts, annecdotal information, hearsay, intuition and personal experience.

We are now operating under a constitutional form of governance. Under this Constitution we have developed features for more extensive student participation than at any major university we know of. With students participating as voting members of all committees--including curriculum and personnel--and comprising about 50% of the school's policy making body, we are operating under a system that radical reformers at most state universities and colleges are only talking about.

In August of 1969, the Constitution Committee published an Interim Report on the Proposed Constitution. This document provides an informative look at the evolution of the Constitution, and the problems, questions, ideas and alternatives the Committee faced. The Interim Report and the first draft of the Constitution were circulated in the School for reaction, discussion and suggestions. In November, the students and faculty of the School of Education voted by secret ballot to adopt the proposed Constitution. According to Article I, A:

> The broad powers conferred on the Dean by the University shall be exercised within the framework of this Constitution in cooperation with the students, faculty and staff of the School of Education in accord with the rules and policies of the University and the Board of Trustees.[1]

The School Council is the primary policy-making body of the School. School Council elections were held in December, 1969. The first Council

[1]Since in this Constitution, the Dean delegates more of his power to the students and faculty of the School than is normal at the University, the Constitution would be binding only for the term of the present Dean.

consisted of ten faculty, fourteen students, and the four Deans. During the semester, two of the three consultant representatives to the Council were nominated by the Dean and approved by the Council.

The first semester of School Council operation was a hectic one. Constitutionally, the Council should be elected at the end of the spring semester and govern for a full school year. However, the first Council had only one semester of existence, and being first, it had a great deal of area to cover, had no precedents to follow and had only half the time in which to do it. But a remarkable amount of work was accomplished, a number of precedents were set, and a lot of lessons were learned. A solid foundation was built, upon which future Councils can work with more effectiveness and efficiency.

The Constitution of the School attempts to provide a mechanism to allow for maximum participation by individuals in the policy formation process. The main vehicle for carrying this out is the committee system. "Special" (ad hoc) committees are provided to consider single issues or problems, make recommendations to the Council and then disband. There is an automatic presumption in favor of the committees' recommendations, since they cannot be amended at meetings of the Council unless such amendments are approved by 3/4 of the Council. This past semester, there were around thirty special committees or special reports by individuals.

Committees contributed a good deal of effort and thought, and submitted reports to the Council that were of invaluable help in policy formation. Because of the policies and precedents set this year, there should be a reduced need in the future for as many committees, and the functioning, coordination and communications within and among the committees and the school can be more refined. Committees were composed of both Council members and non-members, students and faculty. The committee that drew up the criteria by which old centers are reviewed and new ones established was chaired by a student and

composed of two students and two faculty. The committee that established procedures and policies for judicial review, arbitration and constitutional interpretation included two faculty and two students. A Budget Committee, composed of two students and three faculty members, was established to consider policy questions concerning allocation of school funds as suggested by members of the School Community for approval by the Council and recommendation to the administration. Going beyond what it had been asked to do, the Committee worked with the Assistant Dean for Administration and prepared policy guidelines for budget preparation and spending of funds authorized by the University. A committee composed entirely of students studied the problem of communications in the School, a vital area of concern in a School that is attempting to involve all members of its community in governance and in their own education. The committee proposed a number of excellent recommendations and then helped implement them. Each of the above mentioned committees submitted reports and recommendations to the Council that were discussed and enacted as policy of the School. These are only four examples of many excellent efforts by committees, and are not meant to detract from the importance or contribution of other committees.

The Constitution provides that a Constitution Evaluation Committee shall be appointed to "continually review the operation of this Constitution and to make recommendations for its improvement and revision". The Constitution Evaluation Committee was established as a subcommittee of the School Evaluation Committee, along with subcommittees to evaluate the Administration and the Centers. This Committee, and its subcommittees, will be standing committees involved in a continuing evaluation of the School. The past year was spent designing the evaluation methods, and a beginning was made in actual evaluation. The Center Evaluation Committee surveyed the community for its goals for Centers. The Constitution Evaluation Committee produced a report on the implementation of the Constitution. The Administration Evaluation Committee is in the process

of defining what the Administration is. And the overall Evaluation Committee is involved in the first stage of developing a conceptualization of the major components of the School. These committees will hopefully provide continuing feedback on performance and expectations so as to enable the School to serve its members effectively.

The Constitution states that there shall be an Executive Committee of the School Council composed of five persons, that "shall be the primary coordinating body of the School". The Executive Committee was of vital importance this year, since it had the major responsibility of seeing to it that the provisions of the Constitution were implemented. The Committee dealt with a wide range of School concerns and issues, formed committees and mandates, established what issues and problems would go to the Council, decided who should make decisions not specified in the Constitution, attempted to anticipate problems and issues before they reached a crisis stage and did a great many other things necessary to facilitate the implementation of the Constitution and the governance of the School. The committee had a close, but independent relationship with the Dean, something that was of great necessity during the period of transition in authority and power, as new roles and functions developed.

The Constitution provides for a system of conflict resolution. As part of this system, the Judicial Committee, consisting of five persons, was elected by the Council this spring and is in operation. An Ombudsman was approved by the Council in the spring, and he has appointed a panel of consultants to assist him. Although he has been involved in some conflict resolution, his major focus this year has been conceptualization of the role and function of Ombudsman.

The Education Assembly, composed of all faculty, doctoral students in residence, professional appointees, and representatives of undergraduates,

master candidates and support staff, is the "major advisory body and general forum of the School of Education". Before adoption of the Constitution, the Assembly attempted to be a participatory town meeting, decision-making body. But the size of the body tended to limit full discussion and consideration of issues, and many felt frustrated by the lack of effective decision making. Under the Constitution, the much smaller School Council assumes the major authority of the old Assembly, while the Assembly, through meetings of referenda, continues to play an advisory role and has legislative authority in the most important or controversial issues in the School. Some problems still exist in terms of participation in the Assembly and the effectiveness of the meetings. It is likely that the use of referenda will become the major focus for Assembly action, rather than meetings, which will serve best as forums for discussions of problems and concerns.

The Graduate Assembly is composed of all School members of the Graduate Faculty of the University and one third that number elected by and from the Education Assembly. It is "solely responsible for establishing School policy concerning graduate admissions and graduate degrees in Education, subject to the ratification of the School Council". The Assembly has committees dealing with Graduate Admissions, Advising and Student Programs, Comprehensive Examinations, Dissertations, Curriculum and Financial Aid. Policies were established this year in the areas of Admissions, Dissertations and Financial Aid. A Resolution Committee was established to mediate differences in motions and policies passed by the Graduate Assembly and not ratified by the School Council. The Graduate Assembly had problems in poor attendance and lack of involvement by members in policy formation, but changes will hopefully be made in the future concerning internal policies and procedures so as to increase the involvement and input of the members.

The Constitution, and governance in the School, underwent its most severe test during the late spring, as the invasion of Cambodia, the killing of students at Kent State and Jackson State, and the wave of student strikes that swept the

country had their impact at the School. An Education Assembly meeting had previously been scheduled to occur during that time, and the emotion, shock and indignation over national affairs, combined with the internal dissatisfaction of some members of the School community to create an atmosphere of uncertainty, confusion and mistrust about the response of the School, and the role of and reason for the School. Some attempts were made to close down the School without following constitutional methods of decision-making.

On the whole, however, the School recognized the right of all members to participate in whatever way they felt was right for them, without fear of punitive action. The semester ended before the School could become deeply involved in the self-evaluation that some wanted, but hopefully this will take place in the fall, when emotions are less heated, and objective, rational discussion can take place.

The past year was one of adoption of, and adjustment to, a new form of governance, largely without precedent in American higher education. Much remains to be done in refining and completing the establishment of the constitutional provisions for governance in the School, but a strong, firm base was created this year, on which the School can build and restructure in the future. Roles, functions and authorities are still not completely defined and established, and perhaps they should not be too firmly established, but rather should remain flexible enough to meet new needs and responsibilities. However, the School and the University can be justifiably proud of the experiment taking place in the governance of the School of Education, an experiment in decentralization of authority in policy and decision-making from the administration to the faculty and students.

SPECIAL PROJECTS AND PROGRAMS

During the academic year 1969/70 the School of Education was involved in a great many special projects and programs. Such projects combined with the teacher training programs and course offerings of the School enable us to achieve our goal of improved education both through the preparation of effective, committed teachers and educational leaders and through positive changes in the educational system. Through a variety of programs and events designed primarily for students but also for educators in the field and through a variety of off-campus projects we are providing important experiential opportunities for students and we are continually suggesting new directions for education--new directions which will place educational institutions in a position from which they can anticipate and foster needed changes in society.

SPECIAL EVENTS

"Something '70--A Modular Credit Week" is one example of a special event held at the School for the benefit of students and educators from the University as well as from other institutions throughout the country. During that week--February 23-27--all normal classes at the School were suspended and in their place a multi-faceted series of modular credit experiences was offered. These experiences, totaling near 200, were conducted by faculty and doctoral students at the School as well as by many guest speakers from other institutions and educational corporations for the benefit of thousands of participants--students of all ages from all departments in the University and other schools; teachers from area schools and universities as far away

as California and Florida; and many others interested in educational innovations. Offerings varied widely in subject matter and mode of presentation but the unifying factor of the week was new departures in education.

A unique aspect of "Something '70" was the opportunity for students to gain modular credit through participation in events of their choice, thus allowing them to enrich their own academic programs. Three hundred and seventy students obtained over 2,000 modules of credit (the equivalent of more than 130 university credits) during the week.

Due to the success of "Something '70" and the two educational marathons held during the 1968/69 academic year we plan to extend and diversify the program for next year. Scheduled at this time are two week-long events similar in format to "Something '70" stressing educational innovations and featuring multi-media presentations; four modular methods weeks offering teachers from throughout the state the opportunity to present their favorite teaching methods for the benefit of other teachers and students and allowing us to build a resource library of teaching methods; and two graduate student colloquia during which all doctoral candidates at the School will make presentations related to their doctoral work. All three types of events--marathons, methods, and colloquia--are planned to introduce present and future educators to new directions in education and to facilitate the introduction of these innovations into educational systems.

SPECIAL AND OFF CAMPUS PROGRAMS

In the fall of 1969, an assistant deanship was created for Special Program Development to coordinate and facilitate all special and off-campus programs. During the year the Assistant Dean was occupied mainly with coordinating and monitoring all existing projects for quality and congruence with school goals and priorities; with the dissemination of information

concerning existing and potential projects; with conferences with representatives from other institutions, school systems, governmental and other funding agencies who presently or potentially cooperate with the School on special and off-campus programs; with meetings with faculty and doctoral students within the school, concerning proposals for special projects and programs; with the planning and conceptualization of new programs in areas of interest to the whole school; and with the establishment of guidelines for evaluation of all projects and programs. Such guidelines are necessary to insure that all special projects serve the interests of the School and its personnel in the most effective way and are in line with the overall programmatic priorities of the School.

Though varied in scope and intent, all off-campus programs--some seventy in number--allow for the application of university resources and talents to actual school environments. Through special programs and off-campus projects major training functions are carried out, efforts to implement important changes in American education are attempted and a variety of experiments are given an opportunity to be tested.

Each center, the emerging centers and many individuals in the School are involved in off-campus projects. Such projects not only reflect the major teacher training function of the School but also the overall areas of concern as to the state of American education. Those projects which are directly related to teacher training such as the Model Elementary Teacher Education Program and a great number of internship programs are augmented by a variety of projects such as the Northeast Regional Media Center for the Deaf, the Comprehensive Achievement Monitoring Project, the Distributive Education Project whose indirect effects are teacher preparation. We feel strongly that through involvement with off-campus projects our students, both at the

graduate and undergraduate level are receiving an experience and preparation for teaching that is far more crucial and significant than has often been characteristic of traditional student teaching experiences.

Another particular area of concern for the School--and in fact an area of concern for the whole of American society--is the area of urban education. It is in urban areas that the failures of the present educational system are most clearly visible and it is therefore in urban education where we hope to have major impact through providing far reaching changes. Furthermore, we believe that what proves beneficial to urban education will also prove beneficial to suburban education.

Many of our off-campus projects such as the Teacher Corps Project, the Lowell Project, Teachers Inc.; relationships with the Pennsylvania Advancement School, the Parkway Project, the Stevens School, all in Philadelphia; relationships with the New Park School and the South Arsenal Neighborhood Development Project in Hartford and many other projects, not only attest to our interest in urban America but also reflect the interests of many centers in the School.

In addition the School is working toward the establishment of major satellite centers in such cities as Philadelphia, Washington, New York and Temple City, California. In each city we have established special contacts with schools and organizations and sponsor exchanges of undergraduates, graduate students and faculty members. Our efforts with regard to urban education indicate the future thrust of off-campus programs.

Another type of off-campus activity involves sponsoring or participating in networks of schools. By pooling our resources with colleges and universities, with school systems, and with individual innovative schools we hope to achieve the largest possible impact on the total educational system. For example, the School is a member of the Union for Experimenting Colleges and Universities--an organization of 18 institutions including, among others, Antioch, Bard,

Goddard, Hofstra, the University of Minnesota and the University of the Pacific. Both the Union and its members are committed to continual experimentation with new educational ideas as a way of improving their educational programs. Union projects include: Project Change-over, seven Field Study Centers, a Union Graduate School and the University Without Walls.

Within the state of Massachusetts, the School sponsors many programs all of which serve the community by providing better education for residents of Massachusetts. Head Start Training, Teacher Corps, CAM, Media Center for the Deaf, Career Opportunities (Springfield and Worcester), Adult Basic Education, and the study of all Title I projects in Massachusetts and the surrounding states in New England. Such projects seek changes and improvements at all school systems, to special education and education for the disadvantaged, to student teacher training at the undergraduate and graduate levels, to adult education.

Additional off-campus projects range from working with small groups of teachers in a single school in revising the curriculum, to exchanges with other universities in the United States and abroad, to more extensive programs such as the Clearinghouse for Student Initiated Change established and run by the students themselves, and the Lowell Project and SAND Project both of which relate us directly to community agencies striving to restructure education at the local level.

During the past year we have accomplished much in the area of insuring quality programs and off-campus activities and in the area of seeking and fostering new alternatives in education. We hope to do more in the years ahead, for through such activity we not only stimulate the imagination of the School as a whole but also influence positively the educational system.

Program in Instructional Applications of Computers

The program in Instructional Applications of Computers is designed as a highly specialized program of graduate study with major emphasis in the area of computer-assisted instruction (CAI). CAI as a field is in embryonic stage. Appropriately, the formal membership of the program is limited, but growing--one doctoral candidate in 1969-70 and a minimum of two doctoral students enrolled for 1970-71.

A graduate student plans his program of study in consultation with his advisor and may elect interdisciplinary learning experiences from such fields as Computer Science, Educational Philosophy, Psychology, and Statistics. The portfolio system is used for recording samples of student work and letters of evaluation of student performance.

While the program does not stake out claims on areas of study, current foci of interest are:

Computer-Assisted Instruction

Learning Systems Technology

Computer Art

Artificial Intelligence

Its affiliation within the School of Education is with the Non-Center, although contacts with Media Center, Aesthetics Center, Center for Educational Research, Center for Urban Education and CADRE have been made.

Direction of the program during 1969-70 has been under two persons: Dr. John W. Ulrich, Assistant Professor, and Howard A. Peelle, Doctoral Student. Three courses offered this past semester--Education 317/617 "Introduction to Computer Programming in APL"; Education 618 "Instruction Applications of Computers"; and Education 208/508 "Computer Use in the Arts"--served 23, 8 and 15

students, respectively.

Numerous single seminars, demonstrations, and individual tutoring on the uses of computers in education were offered, some on a modular credit basis. Also, in February, 1970, the Computer-Assisted Instruction Laboratory was initiated upon the delivery of one IBM 2741 computer terminal to the School of Education from Research Computing Center, UMass.

The future of this program is bright when viewed in long-range perspectives. Progress is expected to be slow at first--but quickening with time. Educational technology ceases to be alien to educators. Greater numbers of student and increased faculty staffing needs are anticipated over the next three years when the potential of CAI is likely to become more visible. New research and development thrusts are expected in the following areas:

CAI Curriculum Materials

The Art of Programming

Computer Simulation of Educational Futuristics

Plans to expand the CAI Laboratory to three terminals have been laid for the purpose of providing teacher-training and in-service workshops on computer hardware, software, and instructional applications.

Coordination of computer usage in teaching with Hampshire College will be handled by Howard Peelle.

EARLY CHILDHOOD EDUCATION PROGRAM 1969-70

The Early Childhood Education Program has been created to work in an area which has become increasingly significant in the light of statistical evidence suggesting that nearly half of the children in the U.S.A. are not succeeding even in the terms by which success has usually been measured. Thus, a special teacher education program has been initiated for those who will work with children aged two to eight. Proposed is a year of professional study integrated with direct teaching experience. The central focus of the year will be series of seminars and laboratory experiences built around and supported by two eight-week field teaching blocks.

Early childhood education continues to be an area of concern to many students and faculty in the School of Education. Several important and significant events occured during the 1969-70 year that support this contention.

The Office of Economic Opportunity awarded HEAD START a $250,000 grant to the School of Education for the development of a leadership training program for New England and New York State. This project consisted of in-field and five-week on-campus training for five groups of 30 persons working in urban and rural HEAD START Centers. Teams of trainers from northern Maine to Lake Erie came to the University for intensive training in early education, career development, community organization, and social action. All trainees were allowed to register for six credits of undergraduate or graduate credit. It seems clear that the program will continue next year.

A very significant aspect of the leadership training program was the creation of a policy board that now actually controls the project. Personnel selection, curriculum, purpose and selection of trainees is now in the hands

of the people for whom the project was designed. It is the first leadership training project in the nation that has become a truly collaborative adventure between university and community.

This year also saw the development of some experimental courses in early education. A doctoral student worked closely with David Day to develop a model teaching course for undergraduate students. This course required students to work in teams in developing lessons for young children following a teaching paradigm from such theorists as Piaget, Ashton-Warner, Beruter, Montessori, Brunner, and Deutsch. This course has been very successful and will be continued.

David Day developed a course on the Early Childhood Education movement. This was offered during one semester for graduate students. This course explored the philosophical, psychological and pedagogical foundation of contemporary early education programs. It will be continued in 1970-71.

In 1970-71 will be offered a three-course sequence for undergraduate students interested in early education. The Teacher Education Center has agreed to substitute these courses for its regular methods sequence. Students completing the courses will be assigned to student teaching situations in early education programs.

A network of Head Start Centers throughout Western Massachusetts and Vermont has been identified as willing and eager to work with students from UMass. In 1969-70 we were able to place some students in HEAD START Centers and actually have the students live in the community. This has been a very valuable experience and will be expanded for both undergraduates and graduates in 1970-71.

CONTEMPORARY UNIVERSITY

The Contemporary University is a student directed program sponsored by the Ford Foundation and involving students from the University of Massachusetts, Federal City College of Washington, D.C. and the University of South Carolina. The program began in the summer of 1969 and continued through the 1969-70 academic year with students participating for one semester. The program itself was divided into two parts: a full time program which students were involved completely in the program in lieu of their regular course work and were mobile; and a part time program in which students continued to take courses and remained at their home school.

Some of the student projects included a task force study of the Department of Health, Education, and Welfare, a music study on the life and works of John Coltraine, working with centers for high-school dropouts and the formation of new center for Springfield and many other projects.

The students evaluated their experiences with Contemporary University very highly, feeling that it allowed them a strong learning and growth experience. Many potential dropouts were accepted into Contemporary University and as a result of renewed interest have now decided to continue their formal education.

Although the students were scattered all over the country working on their projects, communication was maintained through periodic convocations and weekly newsletters.

CENTER FOR THE STUDY OF AESTHETICS IN EDUCATION

The Center for the Study of Aesthetics in Education (CSAE) is a teacher education center focusing on pre-service and in-service programs in curriculum development, innovative instructional strategies, research, and the development of conceptual models for utilizing creative activities in the arts to enhance learning. Developing alternative roles for the arts in education through the study and development of multi-arts activities for use as stimuli and reinforcement of learning skills represents a major concern of the Center.

Through formal and informal associations with leading curriculum innovators throughout the nation and through the stimulation of interdisciplinary dialogues and team-teaching efforts with faculty and professional artists, students in the aesthetics in education programs have an unusual opportunity to develop improved methods of instruction based on different learning theories, new curriculum models, research and organization, and will have an opportunity to participate in the development of programs affecting the future role of the arts in education.

Projects, courses, and activities sponsored by the CSAE include aesthetic experiences for children conducted at the University demonstration school, curriculum innovation courses in music and sound, visual and plastic arts, movement and dance, theatre and oral interpretation of literature, computer use in the arts, and the role of the administrator in aesthetics in education. A wide range of specialized modular offerings is also available. Summer workshops of national significance have been sponsored and conducted by the CSAE, including institutes in Orff, Kodaly, and Manhattanville Curriculum Project workshops which have attracted students from many parts of the nation.

Undergraduate Teacher Education. Current teacher education courses offered by CSAE are intended to help students--

* study and develop techniques for fostering expressive capacities of children through participation in art activities
* gain confidence in abilities to work with art, music, dance, and theatre media
* recognize the value of art experiences through which the individual can develop his own unique personality and ideas
* use experiences in the arts in conjunction with relevant learning theory to develop competent learners in both cognitive and affective areas.
* develop a theoretical basis for integrating creative activities into their personal philosophy of education
* develop and understand the importance of evaluative criteria for arts activities and programs
* seek more advanced skill training through elective courses in the various fine arts departments

Graduate Programs. In general, graduate programs offered by the CSAE are designed to prepare candidates to develop and evaluate pre-service and in-service programs at all levels of instruction in one or more of the following areas of concentration: music and sound, movement and dance, visual and plastic arts, or theatre and oral interpretation of literature. One of the unique features of the aesthetic center programs is that all candidates are exposed to and become involved in the curriculum innovations in all aesthetic education areas, rather than in just one or two specialties. Graduate programs are highly individualized and are planned within the framework of University requirements by the candidate in consultation with a Master's degree advisor or a doctoral guidance committee. Two basic degree programs are sponsored by the Center for the Study of Aesthetics in Education.

Master of Education. This program is designed to expand the teaching capability of candidates and prepare them to develop and supervise pre-service and in-service programs in the arts at all levels of instruction in at least two areas of concentration: music, art, dance, or theatre. Candidates will have an opportunity to gain an understanding of possible ways in which art experiences can be integrated in order to enhance the development of specific cognitive abilities. Candidates are expected to demonstrate appropriate performance ability in two or more areas of concentration as listed above.

Doctor of Education in Curriculum Development in Applied Aesthetics in Education. This program is designed to prepare candidates having extensive experience and/or training in one or more art fields to develop and evaluate curricula and/or programs in applied aesthetics in education; to design and carry out research related to curriculum development; and to organize, develop, and carry out pre-service and in-service training programs in two or more of the following: music and sound, movement and dance, visual and plastic arts, theatre and oral interpretation of literature. Curriculum specialists prepared at the doctoral level in applied aesthetics in education will be knowledgeable about ways in which the arts can be integrated and will have participated in combining the fields for the purpose of developing specific instructional strategies thus enabling them to initiate and sustain productive collaboration with colleagues from other fields.

Candidates will be expected to have had extensive preparation or experience in one area and performance ability in one or more additional areas.

In addition to the two graduate degree programs offered through the Center, students may work on a Master of Arts in Teaching or a Certificate of Advanced Graduate Study in cooperation with the CSAE. Resources of the Five College Complex (Amherst, Hampshire, Mount Holyoke, Smith, and the

University of Massachusetts) are available for students desiring more applied study in their performance fields. Additional information concerning current course and modular offerings are available through the Center for the Study of Aesthetics in Education.

Appalachian Consortium. The School of Education has been instrumental in helping to form a Consortium of Appalachian colleges and universities which train teachers. The purpose of the Consortium is to organize and coordinate activities concerning improvement of teacher education through the implementation of many of the educational innovations being explored by the School of Education. The Consortium has been active in trying to solicit additional funds to help finance their activities and have maintained communications with the Appalachian Regional Commission in Washington, D. C., and the Council of Southern Mountain States. University of Massachusetts doctoral candidate, Mr. Bill Best, has been instrumental in directing activities concerning the organization of the Consortium, has been elected one of its main officers, and has also become an officer of the Council of Southern Mountain States. This program was initially financed by a small grant from EPDA during 1969-70.

Prison Education. Plans are underway for the development of new educational programs within correctional institutions and advanced degree work which will prepare personnel for carrying out such programs. One of the unique features of the programs as contemplated is that they will concentrate on the training of ex-offenders, on the experimental establishment of half-way houses for juvenile offenders, special curriculum development for correctional institutions, and the training of personnel for work in urban schools where there is a high drop-out rate. Plans are currently underway for holding a conference on campus, with the assistance of a federal grant, for the purpose of consulting on the various needs for extensive modification of current correctional practices and the generation

of recommendations which will be submitted to appropriate state and federal agencies. Mr. Larry Dye, UMass graduate student and former HEW staff member in Washington, is coordinator of the program. As soon as appropriate curricula are developed and enough funds have been accumulated to staff the program, selected courses will be offered.

Indian Education. As an adjunct to the compensatory education program, the School of Education is collaborating with a privately incorporated organization, TRIBE, Inc. (Teaching and Research in Bi-cultural Education, Inc.). The Board members of this organization are made up entirely of American Indians from the northeastern part of the United States. School of Education faculty members have been serving as consultants to the organization which has held a number of conferences during the past year. A summer workshop on Indian education is planned for this summer and an experimental school will open in the fall with about 40 Indian students. As this new independent Indian school becomes firmly established, the School of Education will collaborate with members of the faculty and administration of the school in the development of curriculum and the evaluation of their programs. Eventually, the school may become a site for internship training of UMass students who wish to become prepared for teaching in Indian schools. UMass doctoral candidate, Mr. Edward Hinckley, former Commissioner of Indian Affairs for the State of Maine and Chief Consultant to TRIBE, is in charge of coordinating this program.

Development of the ANISA Model. As an adjunct to the compensatory education program and an outgrowth of the work carried out under the auspices of the Massachusetts Advisory Council on Education over the last two years, work has begun on the development of complete specifications for the ANISA (American National Institutes for Social Advancement) model for compensatory education purposes. The unique feature of this model is that it focuses on the development of learning competence in psycho-motor,

perceptual, cognitive, affective, moral, volitional, and aesthetic areas. Development of the model will proceed largely through independent study projects and educational seminars dealing with various aspects of the model. In April, the model was presented in Washington, D. C., to the staff members of Head Start, Title I ESEA, Teacher Corps, Follow-through, Basic Studies, Office of Child Development and Upward Bound. The model has also been presented to the State Departments of Education in Massachusetts, Maine, and Vermont. Presentation has also been made to State Department Title I Directors of the New England States and most of the Title I Project Directors throughout the State of Massachusetts. At the present time, proposals are being developed for obtaining funds to finance the development of the model. UMass doctoral candidate, Mr. Raymond Shepard, will help to coordinate model development.

THE COUNSELOR EDUCATION AND HUMAN RELATIONS CENTER

The Counselor Education and Human Relations Center this year continued to expand its primary focus, the development of more effective systems for understanding and enhancing the ways the individual functions and grows in his individual, group, and institutional relationships. This led to the generation and testing of new models for counseling and guidance, new models for counselor education, and new directions for the center itself.

In response to the clear need for more effective systems of counseling and guidance, the staff and students of the center worked to develop new models in the classroom, in practicum work, and in consulting services. For instance, a Behavior Modification Model was used to help school children make better use of their educational opportunities, teachers make better use of their potential influence on their students, and consultants make maximum use of their time in the school system. A more direct, experiential mode of counseling was emphasized and developed. Group processes were studied,

developed, and applied. More deliberate and sophisticated attention was given to the analysis of institutional systems and the ways they influence, and can be influenced by, both counseling and group processes. These new models and approaches were tested not only in local school systems, but also in community agencies and penal institutions.

New models for counseling and human relations require new models for the counselor education process itself. We have been developing new experiential, inductive, generative models for counselor education, particularly in the counseling and group process courses. Common sense has been thoroughly confirmed by research regarding the ways one learns more significantly through experience and imitation than through traditional didactic tuition. Therefore, group process experiences are provided as the primary learning opportunity in courses on group process, and in the counseling courses students are given the opportunity to experience the same kinds of personal recognition, careful attention, and/or "systems of reinforcement" which are found to foster significant personal learning and growth in clients, teachers, colleagues, clerks, plumbers, etc.

In developing new directions for the center itself, we are also moving towards a model of what we endeavor to "teach" regarding community development, institutional analysis and change. We are trying to develop the center as a model of a self-renewing community. This year we held two full-day retreats to examine and explore with the students the nature, purposes, potential, and options for the center. Students attended and participated in staff meetings and contributed to important committee work. Students also assisted in courses and offered courses of their own. Out of one of the more successful student-run courses came a series of recommendations for new developments which the students presented and explicated in one of our weekly staff meetings. Many of their recommendations will be put into operation next year. More significantly, we will

establish a more explicit system for soliciting and utilizing student initiative and recommendations next year as part of our efforts to develop and model a self-renewing educational community.

The major thrust of new developments in the future of the center, then, will involve more explicit, operational, and innovative models for counseling, guidance, group process, change agentry, community development, and institutional analysis and change. We will offer "courses" in these "subjects," but we will also be developing new models for teaching/learning processes most appropriate and effective for the development of imaginative professional competence in these activities. This means, for one thing, practicing what we would teach in the way we "teach," in order to multiply and deepen the students' learning experiences. It also means a new orientation program for students and staff in September, new seminars, retreats, open weekly staff meetings, module offerings, workshops, field experiences, etc.

Under a more general "umbrella" of Human Relations the center will offer programs in counseling, group process, and community development, with opportunities to focus on work in higher education, public schools, and community agencies. We expect these programs to continue to evolve, and plan to grow with this evolution, as staff and students continue to work together in this self-renewing community.

THE CENTER FOR EDUCATIONAL RESEARCH

The Center for Educational Research (SMERD) offers educational experiences in educational statistics, educational measurement, educational evaluation, educational research, educational data, and operations research or any combination of these that will meet a student's career needs and interests. At the doctoral level such programs prepare the student for university

faculty positions, educational research planning and execution for private or public research institutions, private consulting, and the like. Programs normally consist of both course work and practice experiences.

Once a student is admitted, he is assigned a temporary advisor who appears to have interests similar to the student. The student and the advisor jointly work out a program for the first semester and form a permanent guidance committee consisting of a permanent advisor and two other members of the faculty. From that point on, the student's program design is a cooperative venture for all four. A student's program of study often includes course work, independent study with members of the faculty and guided practicum experiences.

There are three general categories of directions for the Center for Educational Research: Research, Training, and Service. Many members of the Center are actively engaged in research in the general areas of statistics, measurement, evaluation, research, and data processing. As evidence of the competencies of the group, already a number of the members of the Center have published methodological articles in major journals. The Center for Educational Research aims to offer educational experiences in statistics, measurement, evaluation, research, data processing and operations research or any combination of these that will meet a student's career needs and interests. At the doctoral level such programs will prepare the student for university faculty positions, educational research, planning and execution for private or public research institutions, private consulting, and the like. Programs normally consist of both course work and practical experiences. We aim to train new methodologists to contribute to the above research directions. The Center for Educational Research aims to provide service in the application and/or training in the use of statistics, measurement, evaluation, research, and data processing methodologies to the School, the University, the educational com-

munity, and to society.

These directions may be seen in action by a sampling of Center activities.

1. The establishment of an Education Research Center section of the reserve area of the Education Library.
2. The initiation of an in-house publication, Technical Reports.
3. Work on the establishment of a joint program with the Psychology Department in the area of Educational Psychology.
4. The initiation of a colloquium series.
5. The Comprehensive Achievement Monitoring Project.
6. Addition to the Statistical Package for the Social Sciences (SPSS) to the library of the Computing Center.
7. Simulation Modeling Grant
8. School evaluation
9. Formation of a joint committee with the Statistics Department
10. The general level of consulting with students and faculty of other centers.
11. Systems Team - M.E.T.E.P. Phase I
    Joint membership from Industrial Engineering and School of Business
12. Simulation Team - M.E.T.E.P. Phase 2 and
    Fort Lincoln New Town Project
    Joint SBA - IE - Education participation in simulation modeling (technical report near completion)
13. U.S.O.E. - Funded projected for George Worle (Educ.) and Tom Richards (IE) to do thesis work with simulation model development and validation with data from Learning Research and Development Center, University of Pittsburgh (Oakleaf IPI Data)
14. Relatively easy interchange on courses, degree committees with Industrial Engineering, Computer Science.

Center for Humanistic Education

The Center for Humanistic Education at the University of Massachusetts is interested in the development of curriculum and teacher training methodologies which will enable students and teachers to deal more effectively with their feelings and emotions. Our major work is to develop structured and productive curriculum which can be used in classrooms at all levels of education. As a corollary we wish to devise teacher training curricula by which we can train teachers in the difficult task of aiding students in the emotional and behavioral work which is so much a part of student life. This is not a counseling curriculum for disturbed students, or non-functioning students, but rather a course of study to give those students who are functioning an opportunity to improve their own sense of identity, their interactions with others and their ability to have some control over their fates and environments.

Strength Training. Strength Training is a laboratory experience in which prospective teachers are asked to teach under stressful conditions. It is our feeling that an opportunity to teach in a fairly threatening, laboratory situation will allow teachers to expose their weakest and strongest behaviors. These conditions might be a first day in class, a substitute teaching, a fire drill, or study hall. The teacher will teach his peers, who are acting as students. After this role playing segment of the laboratory is completed, a structured feedback period follows in which the teacher is told by his peers and by the trainers how his behaviors affected the emotions and therefore the behaviors of his students. New behaviors are then suggested in order to give the subject an opportunity to extend his repertoire of teaching skills.

Out-of-class assignments are given which reflect the feedback given to the participating class. Our aim here is to give student teachers an understanding of what emotions they are causing in their classrooms,

how they are causing them, and how the teacher can control these reactions.

Education of the Self is this Center's attempt to give to the entire University, a course in Humanistic Education. As was said earlier, one of our major concerns is that of a student's identity. The Education of the Self is in fact a course in identity. It is a curriculum comprised of many exercises and techniques garnered from the affective movements throughout the country. The work of William Shutz, Herbert Otto, Frederick Perls, Gerald Weinstein, and many others are represented in this curriculum. Our attempt here is to give people structured experiences in looking at their own identity and give them an opportunity to experiment with new emotions and behaviors in order to have some choice about their identity.

The Practicum in Humanistic Curriculum Development is our course in which to develop actual humanistic curriculum which will be experimented with during the length of the course. This is the place where people who have experienced the Education of the Self and are interested in the theory and development of humanistic curriculum may gain experience in its invention and use. Time is given in this class to aid people in finding out what kinds of humanistic education teachers they are through simulations and role playing, but the major emphasis of the course is the actual development of humanistic curricula.

Value Clarification is a mixture of Education of the Self and the Practicum of Humanistic Curriculum Development, in that it offers people experiences in value clarification while suggesting ways in which to apply these experiences to actual classroom settings. Attempts are made to give people methods by which to examine their values and the behaviors which are based in these values.

Special Seminar in Humanistic Education - The special seminar is a doctoral reading seminar in humanistic education. In this course readings dealing with humanistic education are shared and discussed in order to gain

more perspectives on work in this area. Doctoral students who take this course should have already experienced the Education of the Self and the Practicum in Humanistic Curriculum Development.

Training of Trainers - The training of humanistic education trainers is our most advanced course in humanistic education. In this course our attempt is to give people an apprenticeship in which they actually plan, run and evaluate their own humanistic education curriculum. Supervision is provided with the opportunity to discuss results at regular meetings. People in this course should have taken all of the other courses offered at the Center in order to have a background which will enable them to make the most use of this course.

Masters Degree. The Masters Degree program in Humanistic Education involves course work in Strength Training, Education of the Self, Value Clarification and the Practicum in Humanistic Curriculum Development, and Student teaching experience. The student teaching component of the program need not be the teaching of Humanistic Education. In fact, we encourage people to teach something other than humanistic education in order to gain familiarity with the variables involved in classroom teaching. Our contention is that humanistic education is a very difficult and demanding area of education in which to teach. It demands a relaxed yet secure rapport in a classroom, as the content of the course involves self disclosure and a great deal of affective content. We therefore suggest that Masters candidates gain personal knowledge of their own classroom styles, as part of their program. They should discover which personal teaching alternatives are open to them while teaching in a fairly non-threatening academic subject area. Our Masters program probably would involve a time commitment of approximately one calendar year. Other courses that we suggest people take, are in child development, curriculum development, and educational psychology of some sort.

Doctoral Program. The Doctoral Program in Humanistic Education involves much the same course work as that in the Masters degree program while also including the doctoral reading seminar in humanistic education and the training of humanistic education trainers. Our suggestion is that people entering our doctoral program already have some kind of teaching experience, and that they be prepared to do some extensive work in curriculum development, teacher training, and/or the implementation of humanistic curricula in schools. The average time requirement for this course of study would probably be two years.

Activities. The following is a list of the major off-campus activities now in operation in cooperation with the Center for Humanistic Education:

1. Mt. View High School Project. Mt. View High School in California now has a course in Human Relations being offered to high school students. The curriculum for this course was, and is, being developed in conjunction with the staff of the Center for Humanistic Education.
2. Montgomery County, Maryland Project. Still in the preliminary stages, this promises to be a test area for Humanistic Education curriculum and evaluation procedures developed here at the University of Massachusetts. Hopefully it will involve at least three schools in a continuing Humanistic Education program.
3. Philadelphia Teacher Training Project. At the moment we have an ongoing relationship with the Philadelphia Advancement School in the area of inservice teacher training and staff development. In private consultation we are offering Strength Training and other group activities in which teachers in this area can gain experience in Humanistic Education procedures.
4. Pensacola School District Project. As of this coming October

we hope to be working with a large number of schools in the Pensacola, Florida area. In conjunction with the Escarola Humanities Center, under the leadership of Mr. Charles Branch, we hope to be offering workshops and study groups in curriculum for Humanistic Education.

5. Dade County Program. Here, as in Philadelphia, our major impetus has been in the area of teacher training and staff development. We hope to be able to expand our work in this area.

6. Youth Tutoring Youth (YTY). Within the past year, members of the staff from the Center for Humanistic Education have been involved in the preparation of a manual for the training of cross-age tutors. They have been, and will be offering, workshops in various parts of the country acquainting YTY staff members with the methodologies used to train tutors.

CENTER FOR INTERNATIONAL EDUCATION

The Center for International Education is focusing its graduate program around three areas of concern: development education, cross-cultural training and internationalizing American education. The academic thrust of the regular courses provides the theoretical basis for research and evaluation in each area while on-going projects provide the Fellows with program and administrative experience in the field.

Planning, budgeting, training, research and evaluation are closely tied to ongoing projects thereby giving reality and urgency to the academic process. The thrust of each area of interest is as follows:

Development Education:

Study and analysis of the role of education in economic, social,

and political development of nations; adaptation and application of technology and innovations to educational problems in the developing world; creation of new designs in education and new approaches to problems of developing education; training of educational personnel in developing areas.

Cross-cultural Training:

Design and implementation of training procedures for people who are going to work or live in cross-cultural situations; Innovation and research in new training procedures; Application in training programs for Peace Corps, Bureau of American Indians, Model Cities, and general human relations training for personnel in school systems; study of non-verbal communications across cultures; design of behavior modification techniques for cross-cultural training.

Internationalizing American Education:

Study of Overseas and minority cultures; design of curriculum materials to teach about "other" cultures; creating and testing new procedures for teaching about others including games, role-playing, multi-media presentations; designing training programs to produce teachers, Teacher Corps interns, and others who can effectively teach about another culture; research and evaluation of new materials and techniques.

These areas overlap and complement one another. A CIE Fellow will usually select one of these as a major focus. Cutting across these dimensions are specialties such as area studies, and specific professional competencies in education such as teacher training, curriculum development, administration, and guidance and counseling. A Fellow would be expected to develop competencies in both a geographic and a professional area to round out his studies in one of the three major areas outlined above.

The Center's program, now in its second year, is undergoing development and revisions. Students entering the program are directly involved in the evaluation and the modification of the ongoing program. In addition, as Fellows of the Center, they are directly involved in the various projects, research, and training activities. These applied programs provide "focused environments" for student learning. Students are involved in creation, design, funding, implementation and evaluation of new projects as an integral part of their program. They are encouraged to maintain and develop outside contacts with overseas institutions, international organizations, and domestic institutions as part of their professional training. Students are expected to attend conferences, participate in negotiations on specific projects, and travel to institutions engaged in work relating to international education.

Ongoing Projects

Teacher Corps. The UMass Teacher Corps is comprised of 32 teachers--30 of whom have teaching experience in Africa and other non-Western countries. The public schools of Worcester, Massachusetts and the University of Massachusetts were awarded a joint federal grant to develop curriculum in African Studies, Grades K-12.

The Corpsmembers completed a one-semester preservice period at the University in December and have now finished their first semester of internship in eight of the Worcester Schools. Curriculum guides on how to integrate Africa into the existing curriculum are being prepared for publication and dissemination to the general public. Internship will continue in Worcester in September, 1970, to terminate in January, 1971.

Some unique projects in which the Corpsmembers are involved in addition to regular classroom teaching are the setting up of a storefront school, various reading and tutorial projects, a contemporary theater project and others.

This Teacher Corps program has provided an excellent opportunity for the former Peace Corps volunteers to utilize their experiences in Africa in a most meaningful manner, both for themselves and for American children.

Uganda Project - Career Development Study. The Center is directly responsible for staffing and supporting the Tororo Girls' School, a USAID/University of Massachusetts joint project under which 620 girls receive a comprehensive secondary education including training in Home Economics, Commercial Arts, and the traditional academic subjects. During the year a proposal was submitted to USAID, and was funded, under which the CIE proposed to research the following major questions:

1. What are the differences in home backgrounds of the pupils in the four forms of the lower school?
2. What are the relations between these backgrounds and the career aspirations, the career valuations, and the selection of streams by the girls?
3. What are the girls' perceptions of the desirability of the various streams and of the quality of the girls in them?
4. What are the relations between being in a particular stream and career aspirations?
5. What are the relations between the girls' self-images and their expectations for performance on examinations and for career choices?
6. To what extent and in what ways has a modernization of the girls' attitudes taken place?
7. How do the girls at TGS compare in attitudes and career choices to the girls in other, similar schools?
8. What happened to the first graduating pupils and how do their current activities relate to their school experiences?

The research involved the administration of a questionnaire to all the girls in forms one through four. These results were supplemented by interviews, essays, and discussion groups. The 5th form girls were used to indicate something about the temporary job market as shown by their experience during the four-month break. Girls who came from other schools to the 5th form at the Tororo Girls' School served as a control group.

A modified version of the basic research instrument was given to classes in four other girls' schools selected on the basis of their characteristics. Classes in these schools were chosen to provide returns from the range of forms and from vocational streams where they exist. Limited follow-up interviews were completed with a sample of the girls who have left TGS and who had not entered other educational institutions.

The analysis and the written report (scheduled for completion Fall '70) will focus on the policy and curriculum implications of the information collected. Emphasis will be placed on the comparative effects of the different streams at the Tororo Girls' School and on the cumulative effect of the school as a whole. The analysis will be set in the context of comparable data collected from other girls' schools. Use of that data will help to point out ways in which the experience at Tororo can be helpful to other schools.

Non-Western Studies Curricula

During the year a modest grant was awarded to the Center to develop the background materials and basic outline of a model course for the training of prospective teachers in techniques in teaching non-Western studies. This model curriculum would involve affective and experimental as well as content learning. It would be devised for use in Schools of Education and Teacher-Training Colleges throughout the United States and would have detailed instructions for implementing the course under optimal and difficult conditions.

The four phases in this curriculum development project would include research, materials development, implementation (in experimental courses) and

evaluation. The implementation phase would start in the Fall of 1970 with an eight-week experimental course at the University of Massachusetts.

During the Spring of 1971, it is hoped that the course can be taught in at least one other Massachusetts School of Education. The final curriculum will be disseminated as widely as possible. The curriculum will be designed to be implemented with a minimum of assistance.

The feasibility study was completed and has been disseminated to various organizations with the hope that the model curriculum development phase will be funded.

Peace Corps

While there is no direct relationship between the Center and the Peace Corps at the present time, negotiations have begun for a contract under which the Center would provide cross-cultural training for Peace Corps trainers at the Peace Corps Training Center in Ponce, Puerto Rico. In addition, several of the Fellows of the Center are providing professional support to the Peace Corps Training staff as Project Directors and members of Peace Corps Training programs.

FUTURE DIRECTIONS

During the coming year, the Center hopes to expand its involvement with various portions of the educational community by offering workshops and courses in Non-Western Studies as well as developing a curriculum in Non-Western Studies designed for utilization by other institutions. Attention will also be given to the Center's continued relationship with the Teacher Corps and an expansion of the relationship with various international organizations. In addition, plans have begun to implement a Master's Degree Program for professionals from other countries stressing the acquisition of relevant educational skills, the theories and modern techniques of teacher training, and the adaption of those skills, theories and techniques to current priorities

and problems in the country of the participant. The program would also contain a seminar dealing with alternative strategies for introducing educational innovations into the traditional education systems of the developing country.

CENTER FOR LEADERSHIP AND ADMINISTRATION

The Center seeks to provide each student with the opportunity to responsibly develop and carry out a program which will qualify him for an important leadership position in education. This can be accomplished through the dynamics inherent in:

1. The student being responsible for his own educational destiny.
2. The student being closely involved with his professors in a variety of situations.
3. The student being an active and involved participant in one or more peer groups.

As the public university in the state, the University of Massachusetts has the variety of personnel and educational resources to provide the state with a quality program of preparation for persons serving or who will be serving as leaders in education in the state. Other public colleges have not been given the full resources to do this job. There is no conflict in serving within the same program students with potential from both the "national" and Massachusetts "pools of talent." Discussions have been initiated with the Cooperative School Service Center Executive Board with the aim of developing ways to encouraging educators with leadership and administrative potential to seek entrance to the Center's new program. In addition, plans are underway to develop a new model internship which will provide valuable practical experience as well as financial support for a student in residence.

In addition to actively cultivating leadership talent within the Commonwealth, the Center will work to make it possible for any practicing administrator to take specific courses and to participate in conference and workshops according to his professional needs. This would be as an "independent student" --the person would not have to be admitted to the Center's formal program.

Any student admitted to the program is expected to commit himself to amounts of time far beyond simply "dropping in for a course a semester." We encourage full-time participation as soon as this is possible. For the person aspiring to the doctorate, residency makes a full-time commitment a necessity. Every effort will be made to find financial support for full-time students.

The dynamic process

It is the "intertwining," the "intermingling" of three basic "building block" ideas that provides the necessary dynamics for the Center's program.

1. The student is responsible for his own educational destiny. If a program should be "individualized," if a program is supposed to fill a student's needs, then, that program for an adult student (especially one preparing himself for leadership) ought to be the responsibility of the student. The tangible device which has been set up to enable the student to develop and carry out individualized program is the portfolio.
   a. The portfolio will be the record of his work, and more important his impressions of the value of his work as it progresses. Included should be such things as: a critique of courses and books, a delineation of plans and evaluation of efforts, and a description of particularly significant experiences. His portfolio, less than a journal and more than a scrapbook, is the cumulative record of his work in earning a degree or certificate.
   b. There ought to be a strong thread of consistency tying together the experiences and interests a student brings into the program, his long-range career plans, the program he develops for himself, the areas he

chooses for examination, and the problem chosen for intense research in his dissertation. The portfolio is the means by which a person can identify and develop this "thread."

2. The student is closely involved with his professors in a variety of situations. A quality preparation program is one which is rich in the variety of contacts a student has with faculty. The following contacts are available at the present time: the faculty member as fellow participant in faculty and committee meetings, as teacher, as chairman or member of the student's various committees, as fellow member of the Center, and as director of an off-campus project. The specific responsibilities of faculty for working with students on programs, preliminary examinations, and dissertations is spelled out in considerable detail.

3. The student is an active and involved participant in one or more peer groups. A peer group can do something for the student that the faculty cannot do. A peer group can do things for the individual that he cannot do for himself: give him identity, help him build social and awareness skills, provide a nonthreatening framework within which he can try out his leadership skills, and help him in "task-completion." It is not intended that a student become deeply involved with every peer group in which he finds himself during a two or three year period. It is the expressed goal of the Center that he become an involved participant in at least two or three small group arrangements.

Options for learning

The number and kinds of learning experiences from which a student might choose in planning his "individualized" program are almost without limit. In recent Center meetings, faculty and students have discussed the following kinds of learning opportunities, most of which are already available:

1. Basic and introductory courses. Candidates typically will enroll in a year-long course introducing such areas of administrative expertise as budgeting, community relations, computer and systems applications, personnel administration, and collective bargaining. In addition, a seminar will be offered which focuses on the relationship of administrative skills, principles, and theories to the institutional milieu.
2. Specialized courses in the Center and the School of Education. There are opportunities for a person to study extensively within the Center and the School of Education areas in which an administrator becomes involved: the economics of public education, budgeting, innovations in curriculum and organization, personnel administration, the operation of schools, urban education, etc.
3. Specialized courses within the University and other four colleges--Amherst College, Hampshire College, Smith College, and Mt. Holyoke College. Excellent offerings are available in fields related to administration through departments such as government, sociology, business management and organization, computer science, psychology, etc.
4. Work in a discipline which may be unrelated to administration. A student will have an opportunity to develop as an individual who will have the depth of understanding which comes from pursuit of a discipline beyond the casual level. This may be done through: a course of action which may be apparently irrelevant to educational administration; organized work in the field of his choosing, done within and/or without the University.
5. Practicums, field experiences and internships. The student should develop a pattern of experiences in the field which will include one or more opportunities for brief observation of administrative behavior and problems: shadowing a successful leader for a few days; responsibilities for a project requiring participation in a real leadership problem; and a

longer relationship in an institution or school system which will allow some perspective on a variety of leadership problems. Consideration is being given to developing different kinds of internship arrangements.

6. Center and School of Education Projects: On-Campus and Off-Campus. One dimension of the School of Education is the fact that there are many faculty and doctoral students participating in projects of professional interest. Seeking to solve real problems in a methodical manner can certainly be a legitimate part of a student's program in leadership preparation.

7. Workshops, conferences, conventions, interviews, cultural events. The portfolio system allows a person to pursue and capitalize on opportunities for which he would have no time in a formal program. A portfolio entry on a conference might include: events, ideas discussed, controversies, summary of outcomes for the student, and comments by a professor who also participated in the conference.

8. Independent study projects. This is no new option for learning but independent study does take on new significance when there is individualized program planning.

Steps to complete the masters degree and the CAGS

A student enters the Center's program at any point past the bachelor's degree. He is accepted on the basis that he has the potential and the qualifications to complete the doctorate. A student may desire the master's degree (or the CAGS) either on the way or as a terminal point. He would receive the master's degree upon completion of a minimum of the equivalent of one full academic year's work (two for the CAGS). University limitations on amount of work that can be transferred in from another institution would be in effect.

Steps to complete the doctorate

We see a logical continuity from the student's individualized portfolio record program of studies and experiences to the culminating steps of the

preliminary comprehensive examination and dissertation. While a student is ultimately responsible to his faculty committees as he works on and completes the steps in his program, he will receive help and support throughout the entire process through his participation in the peer group task-oriented seminars.

We elicit evidence bearing on these candidates from such preliminary screening devices as records of previous academic work, GRE scores, letters of reference, personal statements of career plans and philosophical positions on questions of educational and societal priorities. We conduct more intensive, final screening by means of personal and "stress" interviews, interaction in both informal and seminar discussions with faculty and students, and evidence of resourcefulness and poise in coping with unexpected situations.

In addition to developing talent pools within our own predoctoral graduate programs and through the initiative of individual faculty members in their far-flung professional contacts, we recruit an integral part of special purpose, funded training programs and in connection with particular talent needs associated with funded research and development projects. An example of the first is the campaign currently underway to recruit three doctoral students as recipients of stipends offered by the National Association of Independent Schools to candidates within its New England membership (printed flyers and nominations from personal contacts are principal mechanisms in this instance). Typical of the second recruiting process is our present effort to recruit doctoral candidates with demonstrated writing skills who can receive support from the exercise of this talent as they pursue doctoral study within the Center.

In the awarding of the Ed.D. degree, we make no formal designation of general field, let alone particular specialty or level within a field; the doctorate is granted from the School of Education through the University

Graduate School. Areas of emphasis or concentration are reflected in the wide-range documentation of the doctoral experience included in the graduate's course transcript and in his portfolio record and evaluation of significant experience, both formal and informal. The import of this non-specific degree-awarding procedure for our Center if reflected in our emphasis on courses and other experiences which develop broadly generalizable understandings and skills (conceptual tools, research methodologies, human relations skills, communications concepts and techniques, etc.). Thus we see ourselves providing preparation for administrators at all school levels as well as in non-school organizations. It is noteworthy in this connection that doctoral candidates may plan programs leading to jointly awarded degrees in cooperation with such other units within the university as the sociology and economics departments and graduate school of business.

On the basis of the progress registered during the past six months of our Center's new life, we may cite the following potential strengths in our emergent doctoral program.

A. Reappraisal of course content and method in the conventional areas of instruction, i.e., administrative theory, interdisciplinary approaches to administration (sociology, psychology, economics, political science), organizational theory, case study and simulation approaches, school law and finance, etc.

B. Increasing responsibility placed on students for conceiving and implementing their programs of study through a reorganized individual and group guidance function which emphasized continual reassessment of goals and performance achievement and the identification of alternative routes for seeking goal realization.

C. A studies proliferation of options developed by students and faculty providing wide parameters of choice for the achievement of common score objectives and for the meeting of idiosyncratic needs.

D. Active student involvement in the affairs of the Center and the affiliated Cooperative School Service Center at the levels of both day-to-day operation as well as implementation of special projects, both academic and service.

E. Explicit opportunities, both structured and unstructured, for doctoral students to interact meaningfully and continually with faculty and with each other, particular emphasis placed presently in organizing mechanisms for effective peer interaction.

F. Wide ranging opportunities for practicum and internship experiences including standard salaried intern appointments of a year's duration as well as shorter term field activities extending through as little as one week's time and arranged for highly specific purposes.

G. Expanding facilities and support for program experimentation and research, including dissertation and collaborative study.

THE CENTER FOR STUDY OF EDUCATIONAL INNOVATIONS

The Center for Study of Educational Innovations (CSEI) is concerned with systematic inquiry into educational change and school improvement. Observations of the conditions and activities characterizing educational institutions today suggest that there are far too many schools either unaware or uninformed of current, tested, innovative practices. It is also clear that there are many institutions moving precipitately into "innovation" because it is fashionable. An examination of public education reveals that even the less threatening changes in schooling are often misrepresented and are usually blunted on the classroom door. The importance of recognizing individual differences among children, for example, is central to rational curriculum development and to effective instruction. However, few schools in the United States generate educational environments designed to complement human variability among students. A center interested in aggressively pursuing the advancement and strategic diffusion of knowledge in educational innovations is needed to foster the development of innovative alternatives.

The Center will develop new research models for education which institutionalize the process of change. The processes of research and development will support each other. Educational research must be designed to evaluate innovation, while at the same time suggest new educational practices that should be field tested. Similarly, innovation must take its directions from ongoing research and suggest new areas for study. The Center will make a concerted effort to devise institutional structures, curricula, instructional strategies, and teacher education procedures that capitalize on such interaction between research and innovation.

The Center, through working relationships with different types of field testing schools will identify problems in education, formulate possible solutions, design strategies and techniques for implementation, analyze selected

processes of change, and interpret any accumulated evidence. The generation of this knowledge and expertise is necessarily based upon a sound understanding of (1) the current state of schooling, (2) the variety of relevant innovations, and (3) the alternative strategies and techniques for implementation. At the outset, CSEI will assume the function of facilitating diagnosis because so little is known about the degree and kind of involvement essential to effective implementation of innovation. As data are accumulated on tested hypotheses, the role and function of the Center will become more prescriptive in emphasis. In other words, CSEI will record and analyze data accumulated from hypotheses tested in actual school settings, thereby obtaining additional data on the multitude of forces and pressures which have relevance to the acceptance of innovations.

Finally, on a long term basis, the Center must of necessity be concerned with success and failure. One major thrust must be towards the identification and understanding of cause and effect relationships. Fear of failure and the bogey of experimental research have far too long delayed implementation of innovative practice and consequently the attainment of the necessary knowledge and expertise essential in facilitating educational improvement and understanding education change.

A study of educational innovation is both needed and long overdue. CSEI will experiment with research, development, and implementation in four compelling areas:

1) Institutional structures

2) Curriculum development

3) Instructional strategies

4) Teacher education

OBJECTIVES

The high priority objectives of the Center will be:

1) To develop and test research - innovation paradigms that will identify

needed changes in schooling.

2) To assess the effectiveness of selected educational innovations.

3) To devise and implement new institutional structures which make optimal use of individual differences among professional personnel.

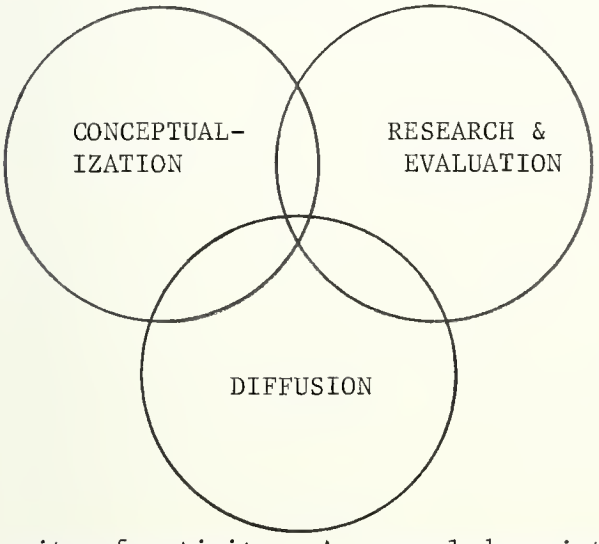
4) To construct and test innovative curriculum materials.

5) To develop strategies and techniques for implementing innovations.

ORGANIZATION

The objectives of the Center can best be realized by an organizational pattern that has three complementing yet autonomous areas of concern.

FIGURE 1



In Figure 1, these dimensions are illustrated as three interlocking spheres. One represents conceptualization, another research and evaluation and the third depicts an element for diffusion. Within this structure there exists no internal divisions, thus allowing participants unrestricted movement and communication among the units of activity. A general description of each unit follows:

Conceptualization - A group of individuals within the Center continually conceptualize the directions of individual projects and determine the best allocation of energies and resources. This unit serves as a place for inquiry and exploration unattached from the ongoing activities of CSEI. In this way it is possible for individuals and small groups to pursue pet ideas or to investigate knowledge generated by a project. The existence of a conceptualization unit insures an outlet for creativity and provides a breath of fresh air for current and future Center endeavors.

The conceptualization unit has a function of determining the nature of existing innovations in school organization, curriculum development, instruc-

tional strategies, and teacher education. Knowledge of the status of innovations provides the Center with a necessary awareness of the trends and problems characteristic of the field. Such data are necessary to keep Center activities relevant and to generate new projects. The conceptualization unit then provides for curiosity, investigation and exchange of ideas and opinions--creative efforts necessary for a salient organization.

Research and Evaluation - This unit is devoted to studying and improving the evaluation of selected innovations. The research evaluation unit will clarify the process of evaluating innovations by formulating appropriate theory; identify, measure, and study variables relevant to the evaluation of selected innovations; and develop and field test systems for evaluating programs and institutions. Also, attention is given to multiple consequences produced by a particular innovation interacting with elements of the total school enterprise.

Hypotheses about strategies and techniques for implementing educational change will be investigated by the research and evaluation unit. Also, this group will determine whether strategies and techniques for fostering change are sufficiently developed for dissemination to a wider audience.

Diffusion - This unit of the Center is responsible for informing educators of current, clinicaly-tested innovations. The dissemination of such information will be followed up with strategies and techniques designed to help public schools accept and implement innovations. Further, the diffusion unit formulates practical solutions to problems existing in schools, makes innovations understandable to the practitioner, and provides back-up services to schools that are in the process of adapting innovations. The creation of strategies and techniques for implementing innovations in schools that have diversified demographic features and unique educational settings is a major priority of this unit.

CSEI wants to avoid rigidity and be freed from the paraphenalia of conventional bureaucratic structure. Some organizational models, with their

chartered lines of authority and restrictive domains of influence frequently do real harm to the life of the young institution they were designed to help. The Center's three dimensional organization however, generates a healthy institutional environment. The organization is built on an organic structure which facilitates free communication between every unit of the Center. In all phases of involvement, knowledge about innovative practices must be current. Yet avenues for an exchange of ideas and opinions must constantly remain open if a climate where individuals can thrive and remain productive is to be established. It is likely that the unique organizational structure of CSEI will result in fluid internal communication, and will provide the action necessary to make the major objectives of the Center a reality.

CURRENT PROJECTS

Bellows Falls, Vermont--Members of CSEI are working with the staff at Bellows Falls in developing an individualized program for students.

Boston Globe--CSEI and the Boston Globe are working on a special curriculum involving the use of newspapers in education. The pilot program will involve five different schools, but it is hoped that it can be expanded at a later date.

Keene Project--Under contract from Keene, New Hampshire, CSEI is studying the school system, will make recommendations on what the schools should be like in twenty years, and recommend procedures that can be used to bring about these changes. Through questionnaires to students, parents, teachers and administrators, measures are being made regarding the influence of the school on students' self-perception.

Manchester, Connecticut--If funding can be arranged, CSEI will implement a multi-media package in Manchester. The target will be the whole community, students, teachers and parents. One idea is to conduct drug seminars for everyone and try to arrive at communication by this means.

Montclair, New Jersey--CSEI has entered into a contractual relationship with the Montclair School District in which people from the School are conducting awareness sessions with teachers and other school personnel with a view toward long range programming. The program may be expanded to involve other areas in New Jersey and a long term technical assistance relationship.

Montpelier Elementary Science Project--CSEI is consulting with the Montpelier School System in choosing and implementing a new science program in the elementary schools--involves meetings and workshops with curriculum committee and teachers to help them implement new elementary science curriculum.

Network of Innovative Schools--The network of innovative schools will represent a cross section of all schools in the Commonwealth--public, private, parochial, elementary and secondary--and will provide a means of encouraging and developing maximum coordination of innovations in order to improve education in the Commonwealth. Cooperating schools will channel information and evaluation of innovations to other schools. The major thrust of the Network is the cooperation among schools toward change.

Project ECCO, Syracuse, N.Y.--An inservice relationship has been established with Bishop Grimes High School in Syracuse. CSEI staff members are working with 25 of their teachers to improve instruction, specifically in the area of large group/small group instruction.

Prince William County, Virginia--Prince William County is presently working on a total renewal of their educational program and have contracted with CSEI to provide technical assistance. We are training change agents within the system and tackling the whole school system with a three year lead time in preparing staff and teachers and 1 1/2 year lead time for instructional leaders.

Stamford, Vermont--In the small Stamford elementary school, members from CSEI

are working with individual teachers helping them identify and use resources to initiate change.

Toy Library--A joint program between the Product Research Department, Milton Bradley Co. and CSEI. The major thrust is to evaluate toys in relation to their usefulness in the improvement of education and enrichment of the educational environment of children.

West Springfield Project--Under contract with West Springfield, CSEI has been involved in curriculum work there for the last seven months. They are trying to create a paradigm to the curriculum development in West Springfield that can be used in other places. Beginning with social studies they have also incorporated a black studies package and other curriculum innovations.

THE CENTER FOR EDUCATIONAL MEDIA AND TECHNOLOGY

The Center for Educational Media and Technology offers learning, service and research opportunities in conventional audio-visual media and library areas as well as in the newer areas of television, film and systems technology. The Center's programs are inter-disciplinary in nature and uses the facilities of the University to implement its courses of study. The programs are designed to: provide an environment in which individuals can learn about the characteristics, capabilities, applications and implications of media, technology and systems; conduct research and evaluation activities in Media and systems; serve the surrounding educational community by making available for its use the appropriate hardware, software and media techniques; encourage the incorporation of appropriate media, technology and systems into a broader range of educational programs than is now the case.

Program

Scope: The Educational Media, Technology, and Systems Programs (EMTS) of the School of Education offers learning, service, and research opportunities

in conventional audio-visual media and library areas as well as the newer areas of television, film, computers, and systems technology.

Goal: The goal of the EMTS program is the preparation of teachers (broadly conceived), administrators, and educational specialists with competency and potential for leadership in the areas of media, technology, and systems. This goal will be attained through:

1. Providing an environment in which individuals can learn about the characteristics, capabilities, applications and implications of media, technology and systems.
2. Conducting research and evaluation activities in media and systems.
3. Serving the educational community by making available appropriate hardware, software, and techniques for its use.
4. Encouraging the incorporation of appropriate Media, Technology, and systems into all educational programs.
5. Investigating the effects on educational outcomes of individual differences in learning.

The Media Center has completed a year of implementation after a year of planning. Our efforts over this two-year period in Educational Media and Technology have led to the conviction that a student should have the opportunity to select from a wide variety of activities that which is most meaningful and relevant to his own development. We are committed to designing programs which maximize freedom and exposure, which provide a rich and exciting learning climate, and which offer multiple options for intellectual and personal growth.

The projects which the Media Center have become involved with include: the Lowell Project, which will lead to an experimental school under the control of the people through a unique Model Cities Program; Research under the rubric of Aptitude-Treatment-Interaction which is currently concentrating on the analysis of Eye Movements preferences as predictors of learning styles; and the development of Media Application for learning environments.

THE CENTER FOR FOUNDATIONS OF EDUCATION

The Center for Foundations of Education is devoted to the development of a comprehensive academic program for undergraduates and graduates. It endeavors to promote the academic study of the educative process and the school as a fundamental societal institution. The Center utilizes an inter-disciplinary approach in an attempt to study education as a discipline with a multi-sided perspective. Included in the interests of the Center are attempts to:

a. Place educational problems in context;

b. Enhance the perspective of professional educators;

c. Stimulate inquiry and analysis;

d. Examine educational objectives and basic assumptions upon which they rest;

e. Re-examine values and provide the arena for testing of them against the realities of the present.

At the undergraduate level, courses in the Foundations of Education are a component of the total professional training program in education. An attempt is made to give prospective teachers an understanding of the fundamental purpose and theory of education as well as an exposure to those forces in society which influence the educational process. It is assumed by the Center that the goal of teacher preparation is not only the production of a good technician with classroom skills, but the development of a professional educator who is knowledgeable about the purpose and scope of the nation's educational enterprise.

The Masters Program offers a sequence of courses and experiences to broaden basic understandings of the sociological, historical, philosophical, social psychological and comparative foundations of education. The focus is general rather than specific with successful completion providing serious students of education with the opportunity to embark upon a reflective approach to the practice and study of education, or entry to further study with greater specialization.

The Doctoral Program offers specialized programs in Educational Philosophy; Educational History; Educational Sociology and Anthropology and Comparative Education. Programs are structured to meet the needs and desires of individual students. Doctoral candidates work in concert with faculty members in organizing individual programs. The career destination of the average student completing a graduate program is college teaching. This career goal, however, is not an exclusive one and graduates with doctorates in educational foundations can be found in a wide spectrum of educational occupations.

Although the Center has been more program-oriented than project-oriented, some projects have been undertaken. Projects include:

(1) a member of the Center is chairman of a planning committee to examine the possibility of a joint doctoral program between the School of Education and the Department of Anthropology. This is in its preliminary planning state. A Center member has also been invited to participate in a graduate course in the Department of Anthropology;

(2) the Center has had continuous contact and dialogue with Mt. Holyoke and Smith College faculty, who are concerned with the social foundations of education. Guest lectures have been given. Their help was solicited in the development of the doctoral program. A faculty member from Mt. Holyoke will be involved in our modular credit week;

(3) a member of the Center has been involved with the State Department of Education as project director for a study of disadvantaged urban youth. Emanating from the project is a published document;

(4) a member of the Center has been instrumental at the State level in formulating the new State kindergarten curriculum guide. Further involvement with the State Department of Education is anticipated.

THE CENTER FOR URBAN EDUCATION

The Center for Urban Education (CUE) at the School of Education, University

of Massachusetts, is a planning, research and training center focusing on education in urban areas. Our tasks: to develop new models for urban schools that will bring real changes in curriculum, teacher attitudes, and school structure; to develop tools for community involvement to help bring about these changes; to discover ways to sensitize teachers, students, parents, and administrators to the needs and feelings of each other.

The Center for Urban Education developed in 1968-69 under the leadership of Atron Gentry during the first planning year of a new School of Education. The excitement of that year has attracted hundreds of applicants to the School ready to try new approaches to education. The members of CUE, over half of whom are Black, bring from their personal and professional experiences a dedication to improving urban education.

The Center for Urban Education has established working relationships in Pasadena and Temple City, California; Hartford, Connecticut; Philadelphia, Pennsylvania; New York, N.Y.; Wilmington, Delaware; and in Springfield, Holyoke, Pittsfield, and Worcester, Massachusetts. No one city presents all the problems and possibilities for change. Yet the symptoms and causes of poor education in one city often look remarkably like the symptoms and causes in another. CUE believes that multi-urban involvements can best provide a theater for researching urban school problems and suggesting generalizable solutions.

CUE supports the concept of reality-based education and research. Existing research paradigms lack organizing categories which fit urban schools or schools in general. Too little has been done in institutions of higher education to make the vital connection between research and the patent needs in urban schools. CUE faculty and student interns research urban problems in the cities themselves and develop strategies for change from their actual experience. The curriculum at CUE for undergraduate and graduate programs evolves from our ongoing programs and projects in various cities.

CUE recognizes that improving urban schools involves an understanding of

the total urban environment. No single key explains the working of a city; a city is an ecological system. Politicians, businessmen, social workers, ghetto residents; smog, noise, transportation systems, housing and landscaping, job opportunities, church groups, racial and ethnic loyalties and antagonisms--all affect the urban school. CUE has a staff of experienced urban specialists, each of whom understands the ecology of urban environments as well as his special area. Community organizers, political scientists, curriculum experts, economists, specialists in differentiated staffing and flexible scheduling, Blacks and Whites experienced in working with human relations make up the task force at CUE.

CUE believes that changes in urban schools can only be relevant and enduring when such changes have support from those concerned--parents, teachers, and students. Rather than develop one ideal curriculum package, CUE stimulates the development of resources from within. The tragedy in urban schools is that so many want change and yet feel powerless. Community leaders want it, but often are disenchanted with the educational establishment and hostile to new "projects and programs." Parents want their children to learn, but too often they are alienated from the schools. Many students and teachers know the shortcomings of their schools but feel helpless.

CUE believes improving urban schools must start with these frustrations and desires--they are our prime resource. Community involvement, sensitizing teachers to Black/White attitudes, student-centered learning--all can be built from the common awareness of the failure of traditional urban schools.

Within this general approach, CUE offers specific tools for facilitating change and draws on the skills developed at the School of Education. Student-centered curricula with an emphasis on humanistic education and the basic skills can replace outmoded, irrelevant curricula. In-service training for teachers can support them in developing new curricula, in learning tools for communicating with the communities they serve, and in being sensitized to the

particular problems and strengths of urban children.

Differentiated staffing and flexible scheduling are models which can loosen the rigid structure of traditional schools and encourage innovation. Teachers become well-paid professionals in a differentiated staff, taking a direct role in curriculum development and school and community policies. The employment of paraprofessionals supports teachers and students and provides a real career ladder by which community people become a part of the schools and improve their economic situation. A flexible schedule frees the rigid time and space structure of the traditional urban schools. Opportunities are made for a vast variety of time and class size allocation, including individualized instruction and cross-age tutoring.

Members of CUE share the excitement of sensing that something is happening--doors are opening for urban children. But the changes are slow and require a united effort of educators, agencies, businessmen, parents and community leaders. CUE's input is increasingly effective as we gain experience and the confidence of our working partners--increasingly frustrating as we see opportunities for greater efforts pass by because our personnel and resources cannot stretch that far. CUE strives for continual growth balanced by tangible achievements and self-evaluation.

During the past academic year, CUE off-campus projects focused on establishing on-site teacher training programs. Three schools--Parkway Project and Thaddeus Stevens School in Philadelphia and New Park School in Hartford--participated. Thirty interns lived on site and taught for one semester supervised by doctoral students in CUE. Next year the on-site teacher training will be expanded.

On an informal consultant basis, several doctoral students in CUE worked with South Arsenal Neighborhood Development Corporation in Hartford in preparing curriculum for their Everywhere School. The project was completed in early spring.

In July and August, 1970, CUE will coordinate a Project Broad Jump, on the campus at UMass for inner-city children from New York. The project will continue for six weeks of classes and enrichment experiences for the children during the summer. Some follow-up responsibility during next year will also fall to CUE.

During this summer and the following academic year, CUE and the School of Education as a whole will probably be involved in two Career Opportunities Programs. These federally-funded programs are designed to provide academic courses and practicum credit for paraprofessionals from Model Cities Areas. Within four to six years, the paraprofessionals will receive B.A.s and teacher certification.

One COP Program, in Springfield and Worcester, Massachusetts will involve about 150 paraprofessionals, 20 of whom will reside on-site at the University of Massachusetts as trainers of teachers and trainers of trainers. The second COP Program will involve about 200 paraprofessionals in Brooklyn Model Cities Area who will be provided with on-site courses and practicum credit toward their degree and certification in education.

TEACHER EDUCATION

The Teacher Education Center is responsible for the preparation of approximately 400 elementary and 500 secondary school teachers each year. The bulk of the center's effort thus goes toward undergraduate teacher education, although there is also an M.A.T. Program for approximately 40 students. In addition, the center has graduate programs for the professional improvement of experienced elementary and secondary school teachers leading to an M.Ed. degree and a Certificate of Advanced Graduate Study in the areas of reading, science, mathematics, social studies and English. The center also offers Ed.D. programs for potential teacher educators in the above curriculum and instruction areas as well as programs for those interested in the general field of

teacher education.

The teacher preparation program is moving toward a modularized, individualized K-12 program based upon concepts developed as a part of a federally funded Model Elementary Teacher Education Program. METEP is a new approach to the preparation of elementary school teachers. Utilizing a performance based curriculum design as a central planning principle, the program utilizes a systems approach for organizing an individualized program. Characteristics of the program include variable entry and exit points, performance criteria, multiple instructional routes for individualized instruction, differentiated staffing patterns, microteaching experiences, continual in-service training programs and responsiveness to client demands. The structure of the education component is designed to allow for constant revision and upgrading.

Beginning in the fall of 1969, the Teacher Education Center offered an intern teaching program which differed substantially from the regular student teaching experience. The basic format of the program provided the following:

1. Pre-service teachers were placed in field classrooms for an entire university semester.
2. The special methods class was taught as an integral part of the field classroom experience by the supervising teacher with the assistance of the School of Education.
3. A practicum experience was required prior to the interning semester.

Using the above as the basic format of the intern program, participating school districts are free to work out programs with the University which are designed to meet the particular needs of both the school, the teachers, and the interns. By combining the field experience and the special methods class, and by placing the supervising teacher in charge of both, we hope to increase the effective supervision the intern receives, and to make the special methods an

ongoing, relevant experience. Interns were placed mainly in schools in the surrounding area--Amherst, Northampton, Easthampton--but also in schools at a greater distance to allow placement in innovative schools. For example some interns were placed at Lincoln-Sudbury and some in Temple City, California as well as in many other locations. A sizable number of interns were placed in innercity schools such as the New Park School in Hartford, and the Parkway Project in Philadelphia.

Off campus activities of the Teacher Education Center include a cooperative program with Teachers, Inc. of New York. The project is an attempt to develop a teacher-training program that has a large community input and community involvement as part of its training procedures.

HIGHER EDUCATION

The Center for Higher Education offers an unusual opportunity for graduate study in the field of Higher Education. The purpose of this program is to assist intelligent, sensitive, and creative individuals to develop the knowledge and experience to effect and implement change within the several institutions of higher learning (community college, four-year liberal arts college, and university). In order to develop an understanding of the individual, while at the same time expanding awareness of group and social structure, the programs in Higher Education are coordinated with the programs in Human Relations, the primary emphasis of which is directed toward maximizing human potential and freeing the individual. These programs are based on the premise that both subject matter study and experience at several levels of human interaction are necessary in the development of individuals interested in the "humanization" of institutions of higher education.

Another area of concern is the study of alternatives to current faculty/student reward systems, and the organizational and curricular structures in the universities.

The doctoral program is characterized by several unique qualities: The Doctor of Education degree is based on "credit experiences" consisting of traditional courses and specific disciplines, research, "lab" and field study, tutorials, and intern or practicum experiences. The emphasis of most programs will be in humanistic education and human relations, including experiences and study in several areas of human development, human interaction, and organizational theory and change.

Each program is individually negotiated by the candiate with the faculty committee. In cooperation with his committee, the student can create an interdisciplinary program, drawing on the talents of individuals from other disciplines such as psychology, philosophy, sociology, and business administration. In addition, the program involves the combined interinstitutional resources of colleges in the surrounding area: Mount Holyoke, Smith, Amherst, and Hampshire Colleges.

Specific degree requirements in addition to the individually negotiated course of studies are: (1) One year of "full-time" study in residence, (2) A negotiable intern or practicum experience (in teaching, research, or administration), and (3) A creative research project, which may be presented in a variety of formats (e.g., dissertation, novel, play, film).

The Community College Affairs area of the Center for Higher Education is involved in several special programs off campus. Under a Title III grant from the U.S. Office of Education they are working with Greenfield Community College in the implementation of an advising-counseling model. A living-learning workshop was designed and carried out in June, 1970 for advising counseling teams consisting of students, teaching faculty and members of the professional counseling staff. These teams will be using their skills during the month of July and the 1970/71 academic year. Center participation in the project will continue throughout the 1970/71 academic year, and it is one expectation that we will offer an institute in the summer of 1971 for New England Community Colleges wishing to improve their advising-counseling practices.

The Center for Community College Affairs is also offering a summer program in curriculum and instruction for community college instructors in an effort to provide inservice instructional staff development as well as preservice preparation of teachers. The first five weeks of this program will be devoted to learning ways of developing appropriate learning environments, designing curriculum so that it will make contact with students

where they are, and utilizing teaching strategies that increase effectiveness of presentation and classroom interaction. The last week of the program will be devoted to a simulated community college in which participants will "try on" what they learned in the earlier part of the summer program.

Participants in the summer program will be offered encouragement for implementing and reinforcing the skills acquired when they return to their posts, and they will be asked to recruit one or two other faculty members interested in improvement of instruction. By working in the field of these small groups, we are confident that we can get a toe hold and begin to develop interest in improved instruction.

The School of Education is a member of the Union for Experimenting Colleges and Universities. By pooling our resources with other innovative colleges and universities, we hope to achieve the largest possible impact on the total educational system. One of the most innovative and far-reaching projects sponsored by the Union is the University Without Walls. Although still in the planning stage, the University Without Walls will allow for the expansion of traditional education on three levels: the university is expanded from the traditional campus setting to where the student wishes to be--at home, abroad, or in any city or area appropriate to his educational goals. Instructional personnel are expanded from the single campus faculty to include any person with expertise in the chosen field, and the range of student ages is expanded from the traditional 18-22 range to include persons from 16-60.

The Center for Occupational Education

Constant technological and social change makes it imperative that occupational educators strive to provide all citizens with an equal opportunity for maximum occupational and social development. One purpose of the Occupational Education Center is to prepare sensitive and imaginative individuals who will assume leadership in the solution of these problems through researching existing knowledge, developing new knowledge, and implementing innovative programs in the field of vocational and technical education.

The Occupational Education Center is cognizant of, and resolute in the belief that the social, educational, and occupational problems of the future requires that individuals in leadership positions cannot be isolated in the knowledge of occupational education but must be concerned with every aspect of education. This philosophic belief necessitates that close coordination be established with all the resources of the University and other Centers of the School of Education, particularly the Urban Education Center, the Higher Education Center, the Administration Center, and the Research Center.

Graduate Programs

The Occupation Education Center affords unique and diverse opportunities for students at the graduate level to prepare for leadership roles. Analogous features of the Doctoral, C.A.G.S., M.A.T., or Master's programs are:

1. Constant monitoring by the student, in conjunction with professional staff members of the School of Education and the Occupation Education Center, to assure that the individual's needs are being met.

2. Alternate routes to insure that the individual is provided at least two equal opportunities for accomplishing the same objective.
3. Flexible exit and entry points are offered to provide for time and competency variances.
4. A constant intercourse with other Centers of the School of Education.
5. A pass-fail system of grading.

The Doctoral Program

This program is characterized by the emphasis placed on student initiative and imaginativeness, in concurrence with his self-selected guidance committee, in designing and negotiating a program of study which will be meaningful to his professional aspirations. The program may consist of lecture courses, field and laboratory experiences, intern experience, programmed instruction, independent study, or negotiated alternatives.

Upon program approval, the candidate determines the speed and resources he will incorporate in meeting his objectives and procedes until an evaluation of his progress is deemed necessary. One evaluation technique used is the guidance committee, which serves not only in the role of assisting the candidate operationalize his educational concepts, but also an evaluation body continually monitoring the candidate's growth. A second method of evaluating the candidate's progress is his portfolio which is originated at program entry and is a record of the candidate's learning experiences, and his evaluation of these experiences. If at this point performance criteria are being met, the candiate is encouraged to continue.

Other criteria for attaining the doctorate are the comprehensive examination and the dissertation or creative project. The candidate is encouraged to exert initiative in determining the format and his readiness

for evaluation, and decided (with the approval of his committee) either to submit a dissertation and defense or an original project.

The C.A.G.S.

The Certificate of Advanced Graduate Studies Program is designed to prepare individuals for community college teaching, for leadership roles in public school education, or to meet other educational goals of those who may not desire to enter the Doctoral Program.

The C.A.G.S. Program incorporates the same unique features of the Doctoral Program exclusive of the guidance committee--which is replaced by a single advisor from the Graduate School staff, and the dissertation--which is replaced by an internship or appropriate project.

The Master's Degree

This program emphasized a primary objective of the Occupational Education Center, which is to provide an individual at least two different modes of attaining his educational objective. A familiar route provides the conventional program of established performance criteria which when successfully met qualifies the individual for the Master's Degree. An alternate avenue provides the individual with the opportunity for constructing a program which he determines to be the most meaningful to his educational aspirations. An individual opting this type of experience negotiates a program of study with an Occupational Education Center staff member and procedes to meet agreed criteria at a pace determined by his own initiative and energy. Successfully meeting the criteria for this option also qualifies the student for the Master's Degree.

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Constitution

School of Education

University of Massachusetts

Amherst, Massachusetts

December 1969

Article I. The Dean

A. General Powers and Responsibilities: The Dean is charged by the University of Massachusetts with administering the School of Education and promoting its development and effectiveness. Accordingly, he is the chief representative of the School externally and the academic and administrative leader of the School internally. The broad powers conferred on the Dean by the University shall be exercised within the framework of this Constitution in cooperation with the students, faculty and staff of the School of Education in accord with the rules and policies of the University and the Board of Trustees.[1]

B. Budget: The Dean shall make recommendations to the School Council concerning the School's budget, substantial reallocations that may be required, and guidelines for the expenditure of state funds. He shall also be responsible for reporting to the School Council how state funds were spent and any proposed budget cuts which might jeopardize approved programs.[2] In addition, the Dean shall have the responsibility to approve the budget of all projects administered by the School that are not funded out of state appropriations.

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1 Since in this Constitution, the Dean delegates more of his power to the students and faculty of the School than is normal at this University, the Constitution would be binding only for the term of the present Dean. Subsequent Deans would have the right to ratify, renegotiate or reject the Constitution unless it is approved by the Board of Trustees. See Interim Report On the Constitution, August, 1969, hereafter cited as Interim Report, pp. 8-10. (Copies of the Interim Report are available at the School of Education Library.)

2 It is recommended that the proposed budget be in program terms as well as line items. While the Dean's office should approve budgets, it should not be able to expend project funds without the approval of the project director.

C. Representation: The Dean will assist faculty and students in the development and funding of educational projects in cooperation with government agencies, foundations, and university officials. To insure appropriate coordination, quality, and communication concerning proposals and commitments by the School:[1]

(1) Requests and proposals up to $200,000 must be approved by the Dean and reported to the School Council.

(2) Request and proposals for amounts over $200,000 must be approved by the Dean and the School Council.[1]

(3) Any requests or proposals that are substantially changed in regard to budget or program must be reapproved by the Dean and/or School Council as required above.

D. Discretionary Authority

1. Executive Budget: The Dean shall have an executive budget to be used at his discretion for general support purposes. The amount of the Budget shall be negotiated each year between the Dean and the School Council or its designated committee, but it shall not exceed 10% of the School's general support funds. The Dean shall account to the School Council each year for his expenditures under his budget.

2. Faculty and Graduate Students: The Dean shall have a percentage of the faculty positions alloted to the School by the University to be

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[1] This procedure would give the Dean and those designated by him to represent the School discretion and flexibility concerning smaller commitments and insure fuller review and coordination concerning larger amounts. The idea is to make the review procedure commensurate with the size of the potential commitment.

used at his discretion. The number of such appointments to be made by the Dean shall be negotiated each year with the School Council or its designated committee but shall not exceed 20% of the positions available.[1]

In addition the Dean shall be authorized to admit a certain number of graduate students at his discretion. The number shall be negotiated each year with the School Council or its designated committee but shall not exceed 15% of the number admitted.

Article II. School Council

A. Responsibility: The School Council shall be the primary policy-making body of the School. It shall have specific responsibility for personnel policy, academic matters (not assigned to the Graduate Assembly), program development, priorities, and resource allocation. In addition, it shall undertake a continuing review and evaluation of the school administration, and shall report on this matter to the Education Assembly at least once each semester.[2]

B. Membership: The members of the Council shall include:

(1) A representative from each center elected in accordance with procedures determined by each center and filed with the Executive Committee. Center directors may not serve as representatives of their centers.

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[1] In any year when there are fewer than 5 faculty appointments allocated to the school, the question of whether any of these appointments should be made at the discretion of the Dean will be a matter of negotiation between the Dean and the School Council.

[2] By ratifying this Constitution, the Dean would agree to recognize the School Council as the primary policy-making body of the School in accordance with the authority granted him by the Trustees of the University. This, however, would not relieve the Dean of his responsibility to the Trustees. Furthermore, nothing in this Constitution supersedes any rules or policies of the University or the Board of Trustees.

(2) A representative of those not affiliated with any center until an Experimental Center is established and a representative is elected.

(3) At-large representatives equal to the total number of center representatives, half students and half faculty. The faculty representatives shall be elected by the faculty. Half the student representatives shall be elected by the graduate students in full-time residence, and half shall be elected by the undergraduate representatives in the Education Assembly.

(4) The Dean and Assistant Deans.

(5) Three consultant representatives from outside the School of Education to be appointed by the Dean and approved by the Council. [1]

C. Alternates: Each Council member shall appoint an alternate who shall be approved at a Council meeting one week before he may serve. The alternate shall have the full rights of a member at

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[1]A. This body seeks to accommodate the conflicting goals of broad representation and effective operation. The Council, as provided above, would be composed of 31 people-11 center representatives, 1 non-center representative, 12 at-large representatives, 4 deans and 3 consultant members. This size is recommended as perhaps the largest group that could allow its members to fully discuss critical issues and perhaps the smallest group that could adequately represent the students, faculty, administration and the larger community. Representatives from each center would insure a diversity of views; an equal number of at-large representatives would insure popular representation by faculty and students. For a fuller consideration of the alternatives considered and the rationale for these recommendations, see Interim Report, "Decision Making at the School of Education: Alternative Forms and Forums," pp. 11-22.

B. Concerning at-large representatives: If the total number of centers is not even (e.g. 11), at-large representatives should be increased by one (i.e. 12). If the number of student representatives is not even (e.g. 7), the larger number of student representatives should be assigned to the doctoral students (i.e. 4).

C. The 3 (non-voting) consultant members, might, for example, consist of 2 representatives of the University (1 faculty and 1 administrator) and 1 representative of the Amherst public schools.

Council meetings when the regular member is not present.[1]

D. Elections: Elections for Council membership shall be held in the spring, and members will serve for a one year term.[2]

E. Chairman: A chairman shall be elected by the School Council to preside over its meetings. With the approval of the Council, the chairman shall determine Council procedures and may appoint a parliamentarian.

F. Quorum: 2/3 of the voting members of the School Council or their alternatives will constitute a Quorum. If a representative or his alternate is not present for 2 consecutive meetings, that position may be declared vacant by the Council.

G. Executive Committee: There shall be an Executive Committee of the Council composed of five persons elected by the new Council in the spring. The Committee shall be the primary coordinating body of the school and shall:

(1) Organize and coordinate the standing and special committees of the Council and coordinate the committees established by the Graduate Assembly.[3]

(2) Coordinate the conflict resolution system with the Ombudsman.

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[1] The purpose of requiring public appointment and approval is to encourage a more careful decision by the Council member and alternate, establish continuity, and guard against a member asking the first person he sees in the hall to represent him.

[2] Elections to the School Council and the Executive Committee should be held at least 6 weeks before the end of the spring term to allow ample time for a smooth and informed transition.

[3] This Constitution will use the term "Special Committees" rather than "Ad Hoc Committees."

(3) Consult with the Dean on urgent matters. When consulting with the Dean on matters that are considered urgent by the Dean and at least 3 members of the Executive Committee, the Committee may act on behalf of the School Council.

(4) Establish and coordinate a communications and feedback system for the School.[1]

(5) Serve as an Election Board to establish an election calendar and coordinate elections provided for under this Constitution.

(6) Determine who shall make any decisions not clearly established by the Constitution or the School Council.[2]

(7) Prepare the agenda for School Council meetings in consultation with the Council chairman.

There shall be a chairman of the Executive Committee who shall be elected by the Executive Committee.[3]

And the Committee shall be allocated sufficient secretarial and administrative assistance as determined by the School Council.[4]

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[1] This Committee and its staff would be responsible for disseminating information on major decisions, policies and proposals of the Dean's offic the committees, the Council and other groups and establishing a procedure for providing those groups with feedback from the Community.

[2] While the Executive Committee is not prohibited from making substantive decisions, this should not be its role. Instead it should decide who should best make the substantive decisions rather than deciding on or reco mending decisions or policy itself.

[3] It is recommened that the Chairman be relieved of at least part of his regular School duties to enable him to carry out his responsibilities -- especially those of coordinating the Committee staff.

[4] It is recommended that at least two doctoral students and one secretary be assigned to assist the Committee initially.

Article III. Mutual Responsibility and Review

A. The Dean and the School Council shall be jointly responsible for making recommendations concerning planning, evaluation, general administration, public relations, new programs, and other areas of school-wide concern not otherwise assigned.

B. To encourage close cooperation in the formulation of school policy and in making major decisions, the Dean and the School Council shall be granted the right to review the major policies and decisions of the other except where discretionary authority is assigned.

To implement this policy, major decisions by the Council or its Committees shall be submitted to the Dean for review, and major decisions of the Dean or his staff shall be submitted to the School Council for review. Decisions, to which there is no objection within 5 school days after they are communicated, become final. The reviewing party must submit his objections in writing to the other party and the Ombudsman. If a compromise can not be negotiated by the parties and the Ombudsman, the initiating party may appeal to the Judicial Committee. The Judicial Committee shall resolve the issue. The Dean and the Council shall jointly establish criteria for determining which decisions are of sufficient importance or controversy to be submitted for review. They may also agree upon additional procedures to expedite mutual review.

Article IV. The Committe System

A. Standing Committees

1. Personnel Committee. The Executive Committee shall nominate the chairman and the members of the Personnel Committee. Each nomination shall be submitted to the School Council and the Dean for approval. Approval by the School Council requires a 4/5 favorable vote on each

nomination.[1] A majority of the members of this committee shall be members of the School faculty and the Assistant Dean for Academic Affairs shall also be a member.[2] In accordance with University regulations, the faculty shall vote every two years to determine whether the School shall continue to have a Personnel Committee, and if so, its composition and method of selection.

2. Judicial Committee. The Executive Committee shall nominate the chairman and members of the Judicial Committee. Each nomination shall be submitted to the School Council and the Dean for approval. Approval by the School Council requires a 4/5 favorable vote on each nomination.

3. Evaluation Committee. The Executive Committee in consultation with the Dean, shall appoint a Constitution Evaluation Committee to continually review the operation of this Constitution and to make recommendations for its improvement and revision.

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[1] The intent is to insure that each member of this committee (as well as the Judicial Committee) is not opposed by any substantial minority of the School Council and is also acceptable to the Dean. Rather than seeking "political balance," the idea is to seek people acceptable to all major factions in the School and to prevent the committee from turning into a political arena at the expense of the issue or person to be judged.

[2] The Personnel Committee thus selected would be concerned with promotion, contract renewal, tenure and related matters. It is recommended that the School Council determine how faculty allocated by the University should be allocated within the School, and that faculty recruitment and selection be coordinated by the Assistant Dean for Academic Affairs in cooperation with the relevant center, program or designated group. After the designated group and the Assistant Dean for Academic Affairs agree on the nomination, it should be approved by the Personnel Committee, except in cases of temporary appointments below the Assistant Professor level and visiting or part-time faculty which should be approved by the Dean.

4. Other Committees: The Executive Committee may establish any other standing or special committees as it sees fit and as requested by the the School Council, the Dean or other bodies provided for in the Constitution.

A. Chairman and Members: Committee chairman shall be selected by the Executive Committee in consultation with the Dean.[1]

Committee membership, not otherwise provided for in the Constitution, shall be determined by the Executive Committee in consultation with the committe chairman and the Dean and shall be based on the expressed interest of the members of the Education Assembly and on the need for balance. Membership on School Committees need not be limited to members of the Education Assembly.[2]

B. Committee Mandate: Each committee shall be given a Mandate which shall be formulated by the Executive Committee with the committee chairman. The Mandate should include the scope of the committee's responsibility and authority, to whom and when it shall report, the names of its members, and their term of office. The mandate should be published in the Tabula Rasa or otherwise communicated to the Education Assembly.

C. Procedures and Reports: To insure that all members of the community have a right to be heard, all committees considering important or controversial issues (as determined by the committee, the Executive Committee or the Dean) shall announce 5 days in advance at least one

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[1] Selection of chairmen by the Dean and Executive Committee (rather than election by the Committee) is intended to insure that the chairmen are selected carefully and that the best person will be sought for the job. This should guard against the practice of committees electing the least busy or least unwilling member as chairman.

[2] The need for balance would not only require a balance of students and faculty but also include members with new perspectives as well as expertise and members with direct involvement as well as those with objectivity. In addition, these factors shall be weighed against presumption in favor of smaller committees.

open hearing on each such issue before the committee, and publish a summary of its recommendations before they are submitted to the School Council. Furthermore, each committee shall submit a brief, informal report to the School Council each semester for publication in Tabula Rasa.

D. Authority: To insure that committe reports are given substantial weight, committee recomendations shall not be amended at meetings of the School Council unless such amendments are approved by 3/4 of the Council.[1]

Article V. Education Assembly

A. Responsibility: The Education Assembly shall be the major advisory body and general forum of the School of Education. In addition, it shall have legislative authority in the most important and controversial policy issues, as determined by the School Council or through referendum.[2] When considering such issues, the moderator of the Education Assembly, in consultation with the Executive Committee, shall invoke special procedures to promote maximum participation.[3]

The Dean shall call open meetings of the Education Assembly at least 2 times each semester at which he will report on the state of the school and answer questions by members of the Community.[4]

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[1] This would insure that changes would be based on the committee's study and deliberation as well as Council objections, not on a hasty amendment from the floor that might be passed by a narrow majority.

[2] "Controversial" issues would be those about which 2/3 of the Council did not agree. The "most important" issues would be those which had major, long term impact on the School.

[3] These would include "procedures for participatory decision making" outlined in the Interim Report (pp. 21-22) or similar procedures designed to insure general participation in discussing and deciding major issues.

[4] It is recommended that questions requiring detailed or precise information not readily available should be submitted in advance and should receive priority.

B. Membership: The Education Assembly shall be composed of all members of the instructional staff. This shall include all persons holding faculty appointments (including lecturers, instructors, and faculty of the Marks Meadow Laboratory School); persons holding professional appointments; and doctoral candidates in full-time residence. In addition, the Education Assembly shall include 30 undergraduate representatives, 10 representatives of Master's candidates and part-time graduate students, and 5 representatives of the school support staff elected by their respective constituencies. The number of undergraduate representatives shall be increased by the Executive Committee if they do not constitute at least 10% of the Assembly membership.[1]

The Education Assembly shall also include 12 representatives from outside the School of Education who will be nominated by the Dean and approved by the Assembly.[2]

Representatives shall be selected for a 1 year term in the spring.

C. Moderator: A moderator shall be elected by the Education Assembly in the spring to preside over its meetings. The moderator shall determine the Assembly rules of procedure with the approval of the Executive Committee. In addition, he may appoint a parliamentarian and shall establish the Assembly agenda in consultation with the Executive Committee and the Dean.

D. Quorum: When meeting as a decision making body, 40% of the members of the Education Assembly shall constitute a quorum. When deciding by ballot, a vote by 50% of the Assembly members will be required.

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[1] "Support staff" should include all full time employees of the School who are not members of the Education Assembly. "Undergraduate representatives" should be elected by undergraduates who are majoring in education or enrolled in teacher certification programs.

[2] This group for example, might consist of 4 representatives from the University (3 faculty and 1 administrator) and 8 representatives of the Massachusetts School System (2 teachers, 2 students, 2 parents, 1 superintendent and 1 principal.)

Article VI. The Graduate Assembly

The Graduate Assembly of the School of Education shall be composed of all School members of the Graduate Faculty of the University and one third that number, not already members of the Graduate Faculty; elected by and from the Education Assembly. This Graduate Assembly shall be solely responsible for establishing School policy concerning graduate admissions and graduate degrees in Education, subject to the ratification of the School Council. In cases where new policy of this Assembly is not ratified by the School Council, present policy, as interpreted by the Assistant Dean for Academic Affairs, shall govern. The Graduate Assembly shall determine its own internal policies and procedures.[1]

Article VII. Consultant Assembly

In consultation with the School Council, the Dean shall establish a Consultant Assembly for the School of Education. This Assembly shall include representatives of the educational community of the Commonwealth and of other groups who will influence the effectiveness of the School and will be influenced by our students, faculty and programs.

The Consultant Assembly shall meet at least once a year to hear a report by the Dean on the state of the School and to be consulted concerning major programs and plans of the School. The establishment of this Assembly shall be viewed as an experiment which shall be evaluated after 2 years by the Dean, the School Council and the Consultant Assembly.

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[1] The Graduate Assembly would be expected to deal with broad academic questions and set minimum standards which would leave each center considerable latitude for determining their own diverse standards and procedures in such matters as admissions and academic programs.

The School Council shall then determine whether this Assembly shall continue to meet.[1]

Article VIII. Centers and Special Programs

A. Centers: The learning Centers represent a major commitment of the School of Education to the purposes of these centers. To further these purposes and to promote diversity and experimentation, each center shall have substantial autonomy in organization and governance and in the development, evaluation, and revision of its programs, except as they significantly affect other centers or the school as a whole.

To promote quality programs and to justify the School's Commitment to them, centers shall:

1. Report to the School Council and the Dean concerning proposed new programs and rules of governance.
2. Submit an annual self-evaluation to the School Council and be evaluated annually by a Council and/or outside evaluation committee.
3. Operate under a three-year School Charter that automatically expires unless renewed by the Council.

The Council shall establish procedures and criteria for Annual and Charter review of existing centers and for the establishment of new centers.

B. Experimental Center: It shall be the policy of the School of Education to encourage the establishment of an Experimental Center supported by or affiliated with the School of Education. This Center should coordinate the offering of spontaneous and experimental educational experiences by students and faculty and should facilitate the testing of new courses. The Experimental Center should establish procedures and criteria for

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[1] Concerning the rationale for the Consultant Assembly, see Interim Report pp. 58-60. It is recommended that this Assembly be consulted and kept informed more frequently in writing.

offering "provisional credits" for educational experiences which may be awarded post hoc when such experience meets the standards of a school evaluation committee. The Council and the Dean shall be responsible for establishing an Experimental Center.[1]

C. Special Programs: Special Programs are small or experimental educational ventures by student/faculty interest groups that are given provisional recognition by the School of Education for up to two years. The School Council shall publish flexible procedures and guidelines for the establishment of such programs which shall operate under a renewable charter. The Council shall also establish procedures and criteria for the annual evaluation of Special Programs and for determining when Special Programs can qualify for center status.

D. An Experimental Fund: To encourage continuing experimentation and innovation at the School of Education, the Dean shall budget a sum each year to support experimental programs that could not find support in any of the established centers. Procedures and criteria for making grants from the Experimental Fund shall be recommended by a special School committee.[2]

Article IX. Conflict Resolution[3]

A. An Ombudsman shall be nominated by the Executive Committee and approved

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[1] See p. 50 of the Interim Report. It is recommended that an Experimental Center be the focus of members of the School of Education Community who wish to associate with others interested in experimental educational activities rather than with any of the established centers or programs.

[2] If centers are allocated support budgets, the Experimental Fund should be budgeted a sum equal to at least 10% of the total support budget of all the centers. Until such time, it is recommended that the Experimental Fund be allocated a minimum of $10,000 each year. While center members should not be prohibited from receiving grants from the Fund, it is recommended that a majority of the committee that recommends procedures for the operation of the Fund should not be members of any center.

[3] See Interim Report pp. 52-57, especially "The Case for Options," pp. 52-53.

by the Dean and 4/5 of the School Council. He shall assist the Executive Committee in coordinating the conflict resolution system - especially in mediation and in developing procedures for affective resolution. He shall assist individuals in the Community in resolving any academic and administrative problems and disputes associated with the School of Education. To serve effectively, he should be relieved of part of his responsibilities and be given appropriate secretarial and administrative assistance, and he shall have the right to serve ex officio on any School Committee, Council or Assembly. He shall be appointed in the spring to a one year term.[1]

B. Mediation and Affective Resolution.

1. Role of Ombudsman: In consultation with the Executive Committee, the Ombudsman shall have primary responsibility for facilitating mediation and affective resolution. He shall appoint a panel of consultants to assist him in developing procedures and in serving as mediators and facilitators as needed.

2. Mediation: This process shall be a prerequisite to judicial resolution, except as otherwise provided.[2]

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[1] Initially he should devote at least half time to his duties as Ombudsman and should be assisted by a full time secretary/administrative assistant and/or one or two graduate assistants. See Interim Report pp. 53-54.

[2] Mediation (or Affective Resolution) should be the primary and preferable way of resolving conflicts between individuals or groups in the School of Education. Because of the problems involved in "going to court" (discussed in the Interim Report pp. 54-55.), this section requires parties to dispute to first attempt to negotiate their differences with the assistance of a mediator. The mediator could be the Ombudsman or other skilled persons (within or outside the School), and mediation would be a private and informal process. Every member of the School community would be expected to participate in mediation procedures, if requested to do so.

B. Affective Resolution: This is an experimental approach to conflict resolution that requires the consent of both parties. It places greater weight on more recent psychological/emotional approaches and seeks to help the parties find a creative solution to their conflict through a deeper understanding of themselves, the other party and the basis of their conflict.

C. Arbitration: This is a less formal alternative to judicial resolution requiring the consent of both parties. Arbitration decisions shall be final. In consultation with the Dean and the Executive Committee, the Judicial Committee shall establish arbitration procedures for the School.[1]

D. Judicial Resolution: This will provide members of the School community the opportunity to have their case fully and publicly heard and finally resolved. The Judicial Committee shall recommend rules and guidelines for judicial procedures for approval by the Dean and the School Council. These procedures shall allow parties to the dispute the right to representation, to call and question witnesses, and to present relevant evidence on their behalf.

Article X. Referendum

The Dean or 15% of the members of the Education Assembly may call a referendum. A majority vote of the total membership of the Education Assembly will carry a referendum. The Executive Committee shall decide on procedures for the referendum. A referendum supersedes any policy of the Dean or School Council.[2]

Article XI. Ratification

This Constitution shall be ratified when a majority of the faculty

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[1] Arbitration would be an alternative method of resolving "review disputes" between the Dean and the School Council, if both agreed.

[2] A Referendum may be called to establish or change any policy in the area of mutual responsibility or within the general responsibility of the Dean or the School Council.

and non-faculty members of the Education Assembly, voting separately, have approved it by secret written ballot and the Dean has concurred in writing.[1]

Article XII. Interpretation

The Judicial Committee shall serve as the interpreter of this Constitution. During the first year this shall be done in consultation with the Chairman of the Constitution Committee.

Article XIII. Amendments

Constitutional Amendments may be proposed by the Dean, the School Council or by petition of 20% of the Education Assembly. Amendments may be approved by 4/5 of the total membership of the School Council or by 2/3 of the total membership of the Education Assembly.[2]

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[1] The rationale for separate voting is presented in the Interim Report p. 61 and pp. 8-10.

[2] Normally, amendments would be submitted to the Education Assembly. Amendment by 4/5 of the School Council provides a more flexible and economical alternative for non-controversial amendments. In case of possible conflict, amendments by the Education Assembly would supersede an amendment by the School Council.

ACTIONS PASSED BY THE SCHOOL OF EDUCATION
SCHOOL COUNCIL

SPRING 1970

January 29, 1970

It was moved and passed that the chairman of the School Council should be a member of the Executive Committee.

Procedure for election of the Executive Committee: Nominations from the floor with plurality vote by members.

February 5, 1970

MOVED TO SEND A LETTER STATING THE COUNCIL'S POSITION ON THE GRIEVANCE COMMITTEE TO DEAN ALLEN. (Appendix A)

Lloyd Kline gave a brief explanation on the "Mass. series for Ed.". Dave Schimmel moved that "The School Council approve in principle the Mass. series project." The motion was passed.

February 12, 1970

Earl Seidman gave an explanation of the withdrawal of proposed courses. After some discussion, Tom Hutchinson made a motion that the Executive Committee be directed to establish an Academic Matters Committee to deal with Earl's suggestion. Dave Crandall seconded the motion. The motion was passed.

February 19, 1970

I WOULD LIKE TO PROPOSE INTERIM GUIDELINES FOR REFINEMENT IN THE FUTURE BY THE GRADUATE FACULTY ASSEMBLY AND THE SCHOOL COUNCIL.

1) DOCTORAL STUDENTS SHOULD NORMALLY TEACH NO MORE THAN ONE COURSE A SEMESTER.

2) DOCTORAL STUDENTS SHOULD NORMALLY TEACH UNDERGRADUATE COURSES ONLY.

3) IN ORDER TO TEACH A GRADUATE COURSE A FACULTY MEMBER MUST BE WORKING DIRECTLY WITH THE GRADUATE STUDENT IN THE COURSE.

4) IF A DOCTORAL STUDENT PROPOSES TO TEACH A COURSE THAT IS PART OF THE REGULAR CURRICULUM OF THE SCHOOL, HE MUST HAVE THE APPROVAL OF THE DIRECTOR OF THE CENTER OR PROGRAM UNDER WHICH THAT COURSE IS NORMALLY OFFERED.

5) IN DEVELOPING A NEW OR EXPERIMENTAL COURSE, THE DOCTORAL STUDENT SHOULD DEVELOP A COURSE OUTLINE AND BIBLIOGRAPHY, WHICH HE THEN PRESENTS TO A FACULTY MEMBER WHO AGREES TO SERIOUSLY WORK WITH THE DOCTORAL CANDIDATE IN THE DEVELOPMENT OF THE COURSE, OR AN ALTERNATIVE WOULD BE FOR THE SCHOOL COUNCIL TO APPOINT A COMMITTEE FOR THE PURPOSE OF SUPERVISING THE ESTABLISHMENT OF COURSES. THE POINT IS THAT THE ASSISTANT DEAN OF ACADEMIC AFFAIRS WOULD LIKE THE ADVICE OF EITHER A COMMITTEE OR A FACULTY MEMBER ON THE SUITABILITY OF A PROPOSED COURSE.

Executive Committee policy concerning committee appointments and mandates. Committees must organize and develop policy to be presented to the Council for approval and implementation. Opportunities for participation will be insured through being able to present ideas to committee members, through public hearings on all controversial issues, through discussion in the

Council when committee proposals are submitted and through conflict resolution procedures available to all members of the School Community. Gabe Heilig moved a vote of confidence in the procedures outlined by Schimmel, Ed Budelmann seconded. The motion was passed with one dissenting vote.

Joyce Hinckley asked if Tab Raz should be published while the decision of whether it should be discontinued or not is being made by the Communications Committee. A revision of Ed's motion was made - that the Communications Committee report on March 5th. The motion was PASSED.

March 5, 1970

Tom Hutchinson moved that the Executive Committee draft a letter of thanks to Glenn Hawkes for Something '70 and the motion was PASSED unanimously.

MOVED THAT THE SCHOOL COUNCIL PROCEDURES BE ACCEPTED. (see Appendix B)

March 12, 1970

Dave Flight was elected unanimously as Ombudsman.

MOVED: THAT TWO NEW, HARD MONEY POSITIONS BE ALLOCATED FOR UNDERGRADUATE TEACHER EDUCATION FOR THE 1970-71 ACADEMIC YEAR.

MOVED: THAT SHOULD AN ADDITIONAL POSITION BECOME AVAILABLE FOR A FACULTY MEMBER WHO WILL SERVE AS DIRECTOR OF CCEBS, THE DEAN MAY, AT HIS DISCRETION, APPOINT HIM TO A POSITION ON THE SCHOOL OF EDUCATION FACULTY.

MOVED: THAT THE FACULTY APPOINTMENTS NOT ALLOCATED TO THE BLACK AND MINORITY RECRUITMENT COMMITTEE FOR 1970-71 MAY BE MADE SIMULTANEOUS WITH OR PRIOR TO THE BLACK AND MINORITY FACULTY APPOINTMENTS.

MOVED: THAT IF THE THREE MINORITY APPOINTMENTS ARE NOT FILLED FOR 1970-71 BY MINORITY FACULTY, THEY SHOULD REMAIN UNFILLED.

MOVED: THAT PHYLLIS ROOP BE GIVEN THE MANDATE TO PROCEED WITH THE SCHOOL OF EDUCATION BULLETIN.
A quorum was not present to vote on the motion, but it was the unanimous spirit of those present that Phyllis should proceed with the Bulletin.

March 19, 1970

Professor Harry Schumer from the Psychology Department was approved as a consultant representative.

MOVED: THAT THE COMMUNICATIONS COMMITTEE SHALL BE GIVEN THE MANDATE TO STIMULATE, COORDINATE, AND ASSIST IN THE IMPLEMENTATION OF INTERIM REPORT -- COMMUNICATIONS COMMITTEE RECOMMENDATIONS NUMBERED: 1, 3-12, 14-19, 22-25, 30.

MOVED: THAT THE COMMUNICATIONS COMMITTEE SHALL BE GIVEN THE MANDATE TO STUDY FURTHER THE INTERIM REPORT -- COMMUNICATIONS COMMITTEE RECOMMENDATIONS NUMBERED: 2, 13, 12a, 20, 21, 26-29, 31-32, AND TO REFER THEM TO OTHER COMMITTEES AND/OR OFFICES WHERE APPROPRIATE.

MOVED: THAT THE COMMUNICATIONS COMMITTEE SHALL REPORT TO THE SCHOOL COUNCIL ON APRIL 9, 1970, ON THE PROGRESS CONCERNING THE ABOVE TWO MOTIONS. (see Appendix C)

MOVED: IF AN ADDITIONAL FACULTY POSITION (BEYOND 3 BLACKS, 2 TEACHER EDUCATION, AND POSSIBLE CCEBS POSITION) BE ALLOCATED TO THE SCHOOL OF EDUCATION (FOR THE 1970-71 ACADEMIC YEAR), THAT POSITION MAY BE FILLED BY THE DEAN AT HIS DISCRETION.

MOVED: THAT ANY FACULTY POSITIONS ALLOCATED TO THE SCHOOL OF EDUCATION (IN ADDITION TO THOSE SPECIFIED IN THE MOTION ABOVE) WILL BE FILLED BY THE DEAN ACCORDING TO PRIORITIES PROPOSED BY HIM AND APPROVED BY THE SCHOOL COUNCIL.

MOVED: THAT FOR THE 1970-71 ACADEMIC YEAR, ANY REPLACEMENT POSITIONS BE MADE BY THE DEAN IN CONSULTATION WITH THE CENTER IN WHICH THE RESIGNATION OCCURS AND THE EXECUTIVE COMMITTEE, AND REPORTED TO THE SCHOOL COUNCIL.

MOVED: THAT THE CENTER (NON-CENTER, OR EMERGING CENTERS -- HIGHER EDUCATION, VOCATIONAL EDUCATION AND EARLY CHILDHOOD EDUCATION) DECIDES (INTERNALLY DECIDES RECOMMENDATIONS IN LINE WITH UNIVERSITY POLICY) ON ADMISSION TO A PROGRAM OF GRADUATE STUDY AND ATTACHES A MEMO OF ACCEPTANCE OR NO ACCEPTANCE. IF ADMITTED, A MAJOR ADVISOR IS SELECTED BY EACH CENTER OR NON-CENTER ADMISSIONS COMMITTEE, WHO WILL SO SERVE UNTIL SUCH TIME AS THE STUDENT OR ADVISOR MIGHT BECOME INCOMPATIBLE, OR UNTIL THE STUDENT'S INTERESTS MIGHT CHANGE, IN WHICH CASE A NEW ADVISOR MUST BE FOUND. (THE ADVISOR MUST AGREE TO THE ASSIGNMENT).

MOVED: THAT EACH PROGRAM AND CENTER SHOULD PETITION A COMMITTEE (ACADEMIC DEAN, DIRECTOR OF GRADUATE STUDIES, CHAIRMAN G. A. ADMISSIONS COMMITTEE) FOR ADMITTEES BY SHOWING EVIDENCE THAT IT HAS THE CAPABILITY OF PROVIDING ADEQUATE FACULTY AND OTHER SUPPORT, AND THAT IT WOULD NOT PUT UNDUE BURDEN ON THE TOTAL RESOURCES OF THE SCHOOL.

MOVED: THAT EACH PROGRAM AND CENTER HAVE THE RIGHT TO DETERMINE THE PREFERENTIAL ORDER IN WHICH ITS QUOTA OF APPLICANTS IS TO BE ADMITTED.

MOVED: THAT THE DEAN BE GRANTED THE PRIVILEGE OF FIVE "WILD CARD" ADMISSIONS.

April 2, 1970

MOVED: THAT THE SCHOOL COUNCIL ENDORSE THE NOTION OF A GRADUATE STUDENT COLLOQUIUM AS DESCRIBED IN DICK ULIN'S MEMO.

MOVED: THAT THE SECOND CONSECUTIVE TIME EITHER THE MEMBER OR HIS ALTERNATE IS ABSENT, THE SEAT WILL BE DECLARED VACANT UNLESS THE DELEGATE PETITIONS, WITHIN A WEEK, FOR REINSTATEMENT AND THE PETITION IS APPROVED BY THE EXECUTIVE COMMITTEE.

MOVED: THAT A RESOLUTION COMMITTEE BE ESTABLISHED TO MEDIATE DIFFERENCES IN MOTIONS PASSED BY THE GRADUATE ASSEMBLY AND ACTED UPON BY THE SCHOOL COUNCIL. THE COMMITTEE WILL BE COMPOSED OF:

1. THE DIRECTOR OF GRADUATE STUDIES, AS THE PERMANENT MEMBER OF THE RESOLUTION COMMITTEE.

2. SOMEONE ELECTED BY THE GRADUATE ASSEMBLY TO REPRESENT IT ON EVERY MOTION PASSED AND SENT TO THE SCHOOL COUNCIL (THIS COULD BE A DIFFERENT PERSON FOR EVERY MOTION). THE PERSON CHOSEN WILL REPRESENT THE GRADUATE ASSEMBLY AT THE SCHOOL COUNCIL IN DEFENSE OF THE MOTION, AND WILL SERVE ON THE RESOLUTION COMMITTEE IF THE MOTION IS REFERRED THERE.

3. THE CHAIRMAN OF THE SCHOOL COUNCIL OR SOMEONE DESIGNATED BY HIM TO REPRESENT THE VIEWS OF THE SCHOOL COUNCIL ON THE MOTIONS.

   IF A GRADUATE ASSEMBLY MOTION IS DEFEATED BY THE SCHOOL COUNCIL, IT WILL BE SENT BACK TO THE GRADUATE ASSEMBLY.

   IF A MOTION IS APPROVED IN PRINCIPLE BY THE SCHOOL COUNCIL, BUT SPECIFIC CHANGES ARE REQUESTED, THE MOTION WILL BE SENT TO THE RESOLUTION COMMITTEE. THE UNANIMOUS DECISION OF THE RESOLUTION COMMITTEE IS REQUIRED FOR APPROVAL OF CHANGES. THAT DECISION WILL STAND UNLESS TEN (10) MEMBERS FROM EITHER THE GRADUATE ASSEMBLY OR THE SCHOOL COUNCIL OBJECT, WITHIN FIVE (5) SCHOOL DAYS OF THE COMMUNICATION OF THE RESOLUTION COMMITTEE DECISION, TO THE CHAIRMAN OF THE SCHOOL COUNCIL OR THE CHAIRMAN OF THE GRADUATE ASSEMBLY.

   IF A GRADUATE ASSEMBLY MOTION IS RATIFIED BY THE SCHOOL COUNCIL, IT WILL STAND AS POLICY.

MOVED: THAT IN GENERAL, 90% OF ADMISSION DECISIONS ON ENTRANCE INTO DEGREE PROGRAMS WILL BE ANNOUNCED BY EACH CENTER AND SUBSEQUENTLY BY THE GRADUATE SCHOOL, AT THREE TIMES DURING THE ACADEMIC YEAR, BY: DECEMBER 1, MARCH 15, AND AUGUST 1.

This motion was agreed upon in principle.

MOVED: THAT IN GENERAL, ADMISSION DECISIONS ON ENTRANCE INTO DEGREE PROGRAMS WILL BE ANNOUNCED BY THE SCHOOL AT THREE TIMES DURING THE ACADEMIC YEAR.

1. 90% OF THE SPRING SEMESTER ADMISSIONS BY DECEMBER 1.
2. 75% OF THE FALL SEMESTER ADMISSIONS BY MARCH 15.
3. 90% OF THE FALL SEMESTER ADMISSIONS BY AUGUST 1.

This motion was suggested for clarification.

April 9, 1970

MOVED: THAT PREPARATION BE MADE AND NECESSARY STEPS TAKEN TO EXPEDITE THE RELOCATION OF THE SCHOOL OF EDUCATION LIBRARY TO THE GRADUATE RESEARCH CENTER (PROVIDING THE MOVE IS PAID FROM THE EDUCATION FUNDS) AND THAT OF THE SPACE MADE AVAILABLE WITHIN THE SCHOOL OF EDUCATION, AN ADEQUATE AREA BE SET ASIDE, FOR A COMMUNITY READING ROOM.

MOVED: THAT THE SCHOOL COUNCIL RECOMMEND THAT THE UNDERGRADUATE COUNCIL MEMBERS HAVE A BUDGET OF AT LEAST $50.00 FOR THE PURPOSE OF COMMUNICATION, SUBJECT ONLY TO THE AVAILABILITY OF FUNDS AS DETERMINED BY THE ADMINISTRATIVE DEAN, AND THAT THIS SMALL FUND BE AVAILABLE UNTIL MORE MONEY CAN BE SECURED.

It was moved, seconded, and PASSED to accept and adopt the Judicial Committee recommendations presented to the School Council. (see Appendix D)

MOVED: THAT IN PRINCIPLE, THE SCHOOL COUNCIL SUPPORTS THE EFFORT TO ESTABLISH BOTH UNDERGRADUATE AND GRADUATE PROGRAMS IN SPECIAL EDUCATION.

MOVED: THAT ALL APPROVED GRADUATE STUDENT PROGRAMS AND DISSERTATION PROPOSALS ARE PUBLIC, AND UPON SUBMISSION TO THE DIRECTOR OF GRADUATE STUDIES, ONE COPY OF EACH WILL BE KEPT ON RESERVE IN THE LIBRARY.

MOVED: THAT THE SCHOOL COUNCIL APPROVE THE MOTIONS PASSED BY THE GRADUATE ASSEMBLY CONCERNING THE PROPOSED PhD AND REVISED EdD DEGREES. (see Appendix E)

April 16, 1970

MOVED: THAT THE SCHOOL COUNCIL ACCEPT THE ADMISSIONS COMMITTEE REPORT AS ACTING IN GOOD FAITH, AND THAT SECTION C OF THE COMMITTEE REPORT, CONCERNING UNFILLED QUOTAS, WHICH READ, "THAT THE COMMITTEE ACT IN ITS BEST JUDGEMENT WITHOUT EXPLICIT GUIDELINES FROM THE SCHOOL COUNCIL ON THIS MATTER", BE ADOPTED. (see Appendix F)

Donald Frizzle, Assistant Superintendant of Amherst-Pelham Regional School District was approved as a consultant representative.

MOVED: THAT THE FOLLOWING WORDING OF ARTICLE II B (1) WHICH NOW READS, "CENTER DIRECTORS MAY NOT SERVE AS REPRESENTATIVES OF THEIR CENTER", BE ELIMINATED.

MOVED: THAT THE WORDING OF ARTICLE II B (5) FOOTNOTE[1] (C) WHICH NOW READS THAT, "THE 3 (NON-VOTING) CONSULTANT MEMBERS..." BE AMENDED TO READ "THE 3 (VOTING) CONSULTANT MEMBERS..."

MOVED: THAT ARTICLE V B, WHICH NOW READS IN PART THAT "IN ADDITION, THE EDUCATION ASSEMBLY SHALL INCLUDE 30 UNDERGRADUATE REPRESENTATIVES, 10 REPRESENTATIVES OF MASTER'S CANDIDATES AND PART-TIME GRADUATE STUDENTS, AND FIVE REPRESENTATIVES OF THE SCHOOL SUPPORT STAFF ELECTED BY THEIR RESPECTIVE CONSTITUENCIES," BE AMENDED TO READ THAT "IN ADDITION, THE EDUCATION ASSEMBLY SHALL INCLUDE 5 REPRESENTATIVES OF THE SCHOOL SUPPORT STAFF ELECTED BY ITS CONSTITUENCY, 10 REPRESENTATIVES OF MASTER'S CANDIDATES AND PART-TIME GRADUATE STUDENTS, AND 30 UNDERGRADUATE REPRESENTATIVES."

MOVED: THAT THE WORDING OF ARTICLE IV A. 4 (C) WHICH NOW READS THAT "...EACH COMMITTEE SHALL SUBMIT A BRIEF, INFORMAL REPORT TO THE SCHOOL COUNCIL EACH SEMESTER FOR PUBLICATION IN TABULA RASA", BE AMENDED TO READ THAT "...EACH COMMITTEE SHALL SUBMIT A BRIEF, INFORMAL REPORT TO THE SCHOOL COUNCIL EACH SEMESTER FOR PUBLICATION."

The Center Criteria Committee recommendations. (See Appendix G)

The Headstart Project proposal. The new proposal is a continuation of the project now in existence, with requested funding of around $250,000. The Project covers seven northeastern states, and involves 150 people a year, with groups on campus for 5 week cycles. The new Project would require no additional level of support from the School, except that the School must commit one classroom for the Project. There may be a need for 3 additional doctoral candidates to help run the program.

It was MOVED, SECONDED, and PASSED to approve the whole Project.

MOVED: THAT AN EXECUTIVE COUNCIL OF 7-9 MEMBERS FROM THE NEW SCHOOL COUNCIL BE ESTABLISHED, THAT WOULD ACT AS A COMBINED SCHOOL COUNCIL AND EXECUTIVE COMMITTEE FOR THE SUMMER. IT IS UNDERSTOOD THAT WHERE FEASIBLE, THE EXECUTIVE COUNCIL WILL DEFER MAJOR POLICY DECISIONS UNTIL THE FULL SCHOOL COUNCIL AND EXECUTIVE COMMITTEE RECONVENE IN THE FALL.

MOVED: THAT WHEN THE DEAN DEEMS IT IN THE BEST INTEREST OF THE SCHOOL TO MAKE CHANGES IN CENTER DIRECTORSHIP, HE IS OBLIGATED, AFTER CONSULTATION WITH THE CENTER DIRECTOR, AND THEN THE CENTER MEMBERS AND THE EXECUTIVE COMMITTEE, TO TAKE APPROPRIATE ACTION, WHICH CAN INCLUDE REMOVAL OF A CENTER DIRECTOR AND THE APPOINTMENT OF AN INTERIM DIRECTOR. THE NEW CENTER DIRECTOR WOULD BE APPOINTED BY THE DEAN, WITH THE ADVICE AND CONSENT OF THE SCHOOL COUNCIL.

MOVED: THAT THE ASSISTANT DEAN FOR ACADEMIC AFFAIRS BE CHARGED WITH THE OVERALL COORDINATION RESPONSIBILITY FOR THE MAY 6TH PRE-REGISTRATION PROCESS.

THAT THE ASSISTANT DEAN FOR ACADEMIC AFFAIRS BE GIVEN A MANDATE TO REQUEST AND RECEIVE WHATEVER COMMUNITY SUPPORT THAT HE DEEMS NECESSARY FOR THE PROPER EXECUTION OF THIS RESPONSIBILITY.

A partial example of the type of mobilization that we desire would be the following:

All centers and programs would have representation in the advising area (probably the library). At established locations, there would be information on Center/Program courses, projects, faculty, etc. There would be available at these locations authorized personnel who could sign for "By Permission Only" courses.

Our emphasis will be on faculty participation through the Center/Program structure. The Undergraduate Advising Office is responsible for the training of the necessary staff components who will man the actual registration process. It is, however, our feeling that it is in the area of programmatic information that previous counseling attempts have failed. We look to the strong support from faculty/center efforts to correct this condition.

April 23, 1970

It was MOVED and SECONDED to accept the budget guidelines as amended and revised. The motion PASSED. (See Appendix H)

MOVED: THAT A COMMITTEE BE FORMED IMMEDIATELY TO INVESTIGATE THE STATUS OF FEMALE DOCTORAL CANDIDATES IN THE SCHOOL OF EDUCATION.

MOVED: THAT THE SCHOOL COUNCIL SHOULD APPOINT A RESEARCH COUNCIL COMPOSED OF FOUR TO SIX MEMBERS WITH A RELATIVELY STABLE COMPOSITION TO INSURE CONSISTENTLY IMPARTIAL POLICY. THIS COUNCIL'S FUNDING SHOULD BE A MATTER OF NEGOTIATION BETWEEN IT AND THE ASSISTANT DEAN OF ADMINISTRATION UNTIL SUCH TIME THAT THIS TYPE OF EXPENDITURE MAY BE REQUESTED DIRECTLY IN THE Q-11 DEPARTMENTAL BUDGET.

THIS COUNCIL SHOULD BE EMPOWERED TO GRANT SMALL SUMS OF MONEY FOR MINOR NON-RECURRENT EXPENSES RELATING TO NEW RESEARCH BY MEMBERS OF THIS EDUCATION COMMUNITY.

THE COUNCIL SHALL DEVELOP CRITERIA AND GUIDELINES FOR MAKING GRANTS, WHICH SHOULD BE PROVIDED TO THE SCHOOL COUNCIL FOR ITS APPROVAL.

MOVED: 1) THAT ELEMENTARY EDUCATION MAJORS RECEIVE FIRST PRIORITY IN ADMISSION TO SCHOOL OF EDUCATION COURSES.

2) THAT STUDENTS PREPARING TO TEACH ON THE SECONDARY LEVEL RECEIVE SECOND PRIORITY IN SCHOOL OF EDUCATION COURSES.

3) THAT WITHIN EACH CATEGORY SENIORS HAVE FIRST PRIORITY, JUNIORS SECOND, SOPHOMORES THIRD, AND FRESHMEN FOURTH.

The Financial Aid Committee Report and recommendations were PASSED by the Graduate Assembly. It was clarified that the motion on General Policy on page 2 covered all hard and soft money assistantship positions.

It was MOVED to ratify the actions of the Graduate Assembly in passing the Financial Aid Committee Report. (See Appendix I)

May 7, 1970

MOVED: THAT THE SCHOOL OF EDUCATION ENDORSE THE FOLLOWING STATEMENT OF THE NON-PROFESSIONAL SUPPORT STAFF:

AS NON-PROFESSIONAL EMPLOYEES OF THE UNIVERSITY OF MASSACHUSETTS, WE, THE UNDERSIGNED, STRONGLY SUPPORT THE STRIKE EFFORT ON THIS CAMPUS AND PLAN TO USE OUR WORKTIME NOT FOR BUSINESS AS USUAL BUT FOR PARTICIPATING ACTIVELY IN THOSE WORKSHOPS DESIGNED TO GIVE US AN OPPORTUNITY TO JOIN NATIONALLY WITH OTHERS WHO WANT TO MAKE OUR VOICES HEARD TO STOP THE WIDENING WAR, POLITICAL REPRESSION AT HOME AND THE UNIVERSITY'S COMPLICITY IN THE MILITARY-INDUSTRIAL ESTABLISHMENT. WE FEEL THAT THE UNIVERSITY HAS AN OBLIGATION TO ALLOW FOR THE OPINIONS OF THOSE EMPLOYEES WHO JOIN THE STRIKE AND NOT TO TAKE REPRESSIVE ACTION. WE URGE THE STUDENTS TO SUPPORT OUR ACTION.

MOVED: THE EDUCATION ASSEMBLY SHALL ISSUE A STATEMENT RECOMMENDING TO ALL MEMBERS OF THE EDUCATION COMMUNITY THAT THEY PARTICIPATE IN SPECIAL, EDUCATIONAL AND NON-VIOLENT ACTIVITIES WHICH SHALL HELP THEM TO EXPRESS THEIR VIEWS, LISTEN TO OTHERS, AND TAKE RESPONSIBLE EFFECTIVE ACTION.

IT IS THE POLICY OF THE SCHOOL THAT NO PUNITIVE ACTION WILL BE TAKEN AGAINST ANY INDIVIDUAL. IN SUCH CASE AS ANY MEMBER OF THE COMMUNITY ENCOUNTERS ANY PUNITIVE ACTION, HE MAY SEEK REDRESS FROM THE OMBUDSMAN OR JUDICIAL COMMITTEE.

WE HOPE THAT STUDENT TEACHERS AND INTERNS WILL FOLLOW THE GUIDELINES LAID DOWN BY THE STUDENT TEACHING OFFICE.

MOVED: RECENT EVENTS IN CAMBODIA HAVE SERVED TO FORCE OUR SOCIETY TO FACE THE CONSEQUENCES OF THE WAR IN SOUTH EAST ASIA, POLITICAL REPRESSION AND RACISM AT HOME, AND INSTITUTIONAL COMPLICITY IN THESE ACTIVITIES.

THE SCHOOL OF EDUCATION FEELS THAT IT IS TIME FOR INSTITUTIONS TO DECLARE THEIR LIBERTY FROM SUCH COMPLICITY. CONSEQUENTLY, THE SCHOOL OF EDUCATION STATES ITS INTENTION TO ENGAGE IN A PROCESS OF SELF-EVALUATION FOR THE PURPOSE OF DETERMINING HOW WE CAN BEST END COMPLICITY AND BEGIN SERVING OUR PRIMARY FUNCTION -- THAT OF REMEDIATING INTERNAL, NATIONAL AND INTERNATIONAL DILEMMAS WHICH MAKE THE ECOLOGICAL MATRIX OF AN EDUCATIONAL SYSTEM ANTITHETICAL TO THE PURPOSES OF EDUCATION -- HUMAN GROWTH AND DEVELOPMENT. THE SCHOOL OF EDUCATION IN NO WAY CONSTRIVES THE ACTIVITIES OF ANY STUDENTS, FACULTY, OR NON-PROFESSIONAL STAFF INVOLVED IN THE PROCESS OF SELF-EVALUATION AS A DERELICTION OF DUTY, BREACH OF CONTRACT, OR IN ANY OTHER WAY A FAILURE TO MEET INSTITUTIONAL COMMITMENTS.

THEREFORE, THE SCHOOL COUNCIL DECLARES A PERIOD OF MOURNING, TO LAST AT LEAST A WEEK, DURING WHICH BUSINESS AS IT HAS BEEN CONDUCTED WITHIN THE SCHOOL WILL NOT BE CONDUCTED.

May 21, 1970

MOVED: THAT THE SUMMER COUNCIL WILL CONSIST OF MEMBERS OF THE SCHOOL COUNCIL WHO ARE PRESENT AT THE TIME A MEETING IS CALLED. A QUORUM FOR THE SUMMER COUNCIL IS SEVEN MEMBERS. IT IS UNDERSTOOD THAT WHERE FEASIBLE, THE SUMMER COUNCIL WILL DEFER MAJOR POLICY DECISIONS UNTIL THE FULL SCHOOL COUNCIL AND EXECUTIVE COMMITTEE RECONVENE IN THE FALL.

MOVED: THAT THE SCHOOL OF EDUCATION DETERMINE THE EXTENT OF ITS COMMITMENT TO PROVIDING A VIABLE PROGRAM FOR THE UNDERGRADUATE STUDENTS AND THAT AN OFFICIAL POLICY CONCERNING THIS COMMITMENT BE DEFINED.

MOVED: THAT IF A VACANCY AS DEFINED BY THE UNIVERSITY OCCURS IN A NON-CENTER FACULTY POSITION, A COMMITTEE, WITH A MAJORITY OF NON-CENTER MEMBERS, WILL BE APPOINTED BY THE DEAN AND THE EXECUTIVE COMMITTEE TO RECRUIT FOR THE POSITION. THE APPOINTMENT WILL BE MADE BY THE DEAN IN CONSULTATION WITH THE EXECUTIVE COMMITTEE, AND THE APPROVAL OF THE RECRUITING COMMITTEE.

May 28, 1970

A motion was made to support a new proposal for the MACE Project. The motion was carried.

A suggestion was made and it was VOTED, to have the Dean present to the School Council in the fall the restraints that he feels each of the Center's are, or should be, operating under.

APPENDIX A

MEMORANDUM

From: School Council

To: Dean Allen

Ref: Grievance Hearings

Date: February 6, 1970

In response to your request(Ref. Jan. 28), that the School Council take an official position on the grievances raised against Dean Seidman and yourself, we have decided not to take such position.

Since the legitimacy of the constitution and the council have been questioned in the grievance, it is the opinion of the Council that any official position we take might therefore, appear self-serving and suspect.

The above position, however, does not mean that we are uninterested or unconcerned about the grievances. We are willing individually or as a body to respond and/or assist the grievance committee in any way we can.

Dick Clark

Chairman, School Council.

APPENDIX B

SCHOOL COUNCIL PROCEDURES

1. Attendance will be taken at each meeting by the secretary. Three categories: (1) members present; (2) alternates (and whom they represent) present and acting; (3) unrepresented(by alternates) members absent. Attendance will be reported in the minutes.

2. Minutes will be taken at each meeting and distributed to all members of the Education Assembly. Minutes will show attendance all actions taken, and provide sufficient detail to summarize views expressed on all issues. At each meeting, minutes from the previous meeting will be reviewed, corrected if necessary, and approved.

3. Participation: all members of or visitors to the University are welcomed at School Council meetings as observers except during the announcement and question periods. Participation in discussion and vo[illegible] is limited to members of the School Council, or their approved alternates when the member is absent, except when the chairman or the Executive Committee explicity requests non-member participation.

4. Agenda: The Executive Committee prepares School Council agendas; thus, any matter to be brought before the School Council must be submitted to the Executive Committee the week prior to the School Council meeting at which the matter will be raised. Agendas will be published and distributed in advance of the meeting to all members and alternates.

5. Agenda Categories and Rules
The agenda will follow the outlined format, and the chairman will be responsible for enforcing the rules governing each section. Rules may be suspended by a 2/3 vote of the quorum present in such a motion by the chairman or from the floor.

   (1) Roll call - by the secretary at announced starting time.

   (2) Announcements and answers to previous questions - these need not be announced on the agenda. They are for information, limited to a maximum of five minutes each for both presentation and discussion.

   (3) Questions - same rationale and rules as for #2. Often, answers will necessarily be deferred to a subsequent meeting.

   (4) Business - all motions to be acted upon will be published in advance of the meeting on or with the council agenda. Any motion from the floor will only be discussed if rules are suspended. Discussion will start after a motion is made and seconded, and discussion will continue until the question is called, seconded, and voted by a majority at which time discussion will stop, and voting will occur.

The meeting will close when the last published item of business is concluded.

APPENDIX C

INTERIM REPORT - COMMUNICATIONS COMMITTEE

Mandate: To investigate communication problems in the School of Education on a terminal basis.

Basically, the School of Education needs more and discriminate and economic communications. The recommendations following this report were arrived at with these criteria in mind. It should be mentioned however, not all the communication problems of the school are a matter of communication--but of structure. Change certain structures--facilitate communications.

Communication systems have input, processing and output components in common. Input systems should be accessable, simple, efficient, visible and in a constant process of evaluation. Processing should be quick, efficient and inexpensive. Output should be discriminate, simple, efficient and inexpensive.

A single means of instantaneously reaching any one or number of individuals in the education community would be ideal. The committee has not developed an ideal system during the past 15 days. Some systems are instantaneous and individualized (e.g. telephone), but they cannot deal with large volumes. Others can handle the masses but aren't individualized or specific enough.

This report is at best inadequate. Continued study is necessary. Any future efforts must look at the interest groups, existing and potential systems, types of information, plus the quantity and quality of information desirable. Some information should be filtered, other information should not.

Early in its efforts, the committee set about identifying interest groups and existing systems in the education community. It then proposed and solicited suggestions for new communication systems.

The committee's recommendations may not be completely coherent. This is the phenotypic effect of too little time and the need to propose solutions for the more pressing problems (given that some are only stop-gap measures).

SHORT TERM RECOMMENDATIONS

Calendar

1. A Kiosk should be permanently established and located in the front foyer of the school. It would have six sides: 5 to display events occurring on working days; 1 for weekend events.

   It should be checked and kept current daily.

   It should be the responsibility of a specific secretary or office. This office will design policies and regulations regarding the administration of the Kiosk. Some recommended policies and rules are:

   1. Top part would be structured for typed (primer) calendar data

   2. 3" or so should be reserved just below strutured section for special events.

   3. Bottom would be reserved for small signs and posters for coming or current events which would be removed daily unless other agreements are made with the responsible office.

2. A "Barge in Telephone Line" be installed which would play a continous 3 minute tape loop. "Barge in" implies an ability to handle any number of callers simultaneously. Both Calendar and limited Administrative Information could be placed on it.

   It would need daily updating

   It would be highly accessible (undergrads?)

   Editing policies will have to be developed.

3. The "Tele-Tabula" system employed during "Something '70" be continued on a regular basis. Besides augmenting calendar publicity, andplaying music in the halls, it could also be rigged to serve as a P.A. or paging system. Placement of monitors is suggested in front and auditorium foyers and perhaps room 126. Available immediately--eventually it will cost about $600.00 for purchase of T.V. camera solely for this purpose.

4. A limited number of printed calendars should be printed weekly on the offset press and left in the hall for interested persons.

5. Presently one fifteen hour per week work-study student is available to aid in the implementation of recommendations 1-4. He would actively solicit and compile items to be entered.

6. Forms to schedule events should be developed and made available in the School Council Office and other key areas.

7. One telephone number should be publicized as the appropriate place to schedule events on the calendar.

INFORMATION

8. Area should be made more visible with large receptionist sign.

9. Signs should be painted on doors or placed at other entrances directing visitors toward the reception desk (RECEPTIONIST>).

10. The receptionist's chair behind the counter in room 121 should be higher so she is at ~~the~~ "eye level" with visitors.

11. A short seminar on phone answering practices and techniques should be conducted for the appropriate staff members by the Telephone Company.

12. The undergraduate representatives to the School Council should have a desk located in room 126.

PUBLICATIONS

Tab-Raz - should serve as a forum for the exchange of ideas relevant to education.

13. It should be a semi-monthly publication.

The first issue in a given month would be an "in house" publication for internal distribution to the School of Education community only (no copies would be mailed). There would be no censorship of content. Fewer issues would be printed.

The second issue in a given month would be edited in such a manner that it still serve its prime purpose but, be screened from materials deemed deleterious from a "public relations" point of view. The Assistant Dean's office would approve before any copies were mailed.

ADMINISTRATIVE BULLETIN

14. This would be a weekly publication similar to the University Bulletin composed of:

    1. pertinent extracts from the University Bulletin

    2. Compiled School of Ed. "Mass Memoranda".

The intent here is to eliminate waste of paper and distribution time.

BULLETIN BOARDS

15. A permanent directory should be established on the glass covered bulletin boards in the front and auditorium foyers, information displayed should include:
    1. Faculty members w/room #s
    2. Prospect w/room #s
    3. Centers w/room #s
    4. Administrative and service functions w/room #s
    5. Map of School

6. Map of campus
7. Locations of Center bulletin boards

16. Centers should each have a designated bulletin board.

17. Additional bulletin boards should be designated for undergrad info., grad info., placement info. for B.A., M.A. & M.A.T. students and social activities.

SHORT TERM REPORTS

18. A course description catalog should be published listing all Fall '70 courses including :
    1. The type of descriptive material currently available
    2. Materials and books required
    3. Components, form and content of subject matter
    4. Number of students to be enrolled (maximum).
    5. Prerequisites if any
    6. A brief statement about the teacher

    Deadline for contents April 5.
    Release April 15.

19. Centers, Projects, & Programs Report to School Council
    All activities should submit to the Council by April 15 a report including the following information:
    1. Demography
    2. Projects
    3. Financial status (soft and hard money)
    4. Evaluative status
    5. Learning resources
    6. Future projections

20. Public Relations brochures should be developed and published by appropriate activities.

21. The administration should submit an Annual Deans' Report in September of each year regarding the status of the Community. It should include the following information:
    1. Political status of the School.
    2. Academic status of School.
    3. Achievements.
    4. Resources--available and needed.
    5. Demography.
    6. Evaluative status of School.
    7. Projections.
    8. Projects and activities.
    9. Financial status of School.

    Also quarterly revisions should be made on Nov. 15, Jan. 15 and March 15 of each year followed by a summary on June 1.

23. The School Council should publish monthly a brief summary of its activities in Tab Raz.

MISCELLANEOUS

24. A publicized Open Door Day should be held at the beginning of each semester and during Pre-registration. Its prime function would be counseling. Demonstrations could also be put on in addition to short (30 minute) large group presentations in the Auditorium.

25. An accurate mailing list of all persons in the Education Community should be established and maintained.

26. The interest group taxonomy should be completed and maintained.

APPENDIX D

JUDICIAL PLANNING COMMITTEE RECOMMENDATIONS

Selection Procedures

The Judicial Planning Committee recommends that:

1. The Executive Committee shall nominate the chairman and members of the Judicial Committee, subject to the approval of the School Council and the Dean. A 4/5 favorable vote of the Council is required on each nomination. The following criteria will be used in making the nominations:

   a. That the size of the Committee be five (5) members.

   b. That a majority of these be faculty members.

   c. That such skills as legal expertise and human relations and communications be represented.

   d. That insofar as possible the various generalizable styles, concerns, and attitudes present in the School be also represented.

2. The terms of Judicial Committee members be two-year terms, staggered in such a way as to insure a sense of continuity.

Judicial Review of Personnel Decisions

A. Relations With The Personnel Committee

In the event of individuals bringing grievances against the Personnel Committee on the basis of its decisions, the Judicial Committee:

1. Will reserve the right to refuse to consider cases which involve honest differences of opinion regarding professional judgments.

2. Will only consider those cases in which the grievant can demonstrate actions by the Personnel Committee which are in violation of official school and university personnel policies procedures.

B. Relations With The Office of the Dean

In the event of individuals bringing grievances against the Dean on the basis of his decisions on personnel matters, the Judicial Committee:

1. Will reserve the right to refuse to consider cases which involve honest differences of opinion regarding professional judgments.

2. Will only consider those cases in which the grievant can demonstrate acts by the Dean which are in violation of official school and university policies and procedures.

Procedures for Conflict Resolution

A. In the case of grievances not related to School-wide policy matters the Judicial Committee:

1. Will require that prior to its direct involvement in the resolution of such conflicts the grievant attempt to resolve the situation through the Office of Ombudsman.*

a. The Ombudsman, with the consent of both parties, may attempt resolution through either affective resolution procedures and/or arbitration. (Cf. Article IX, Section B. of the Constitution).

b. Both parties would have to have met with the Ombudsman (or with an alternate acceptable to the parties) in an attempt to have their differences mediated before the Judicial Committee will agree to involve itself directly in the attempt to resolve such differences.

2. Reserves the right to refuse to consider grievances in which the Ombudsman cannot report that accepted procedures have been honestly, if unsuccessfully, attempted.

3. May hold executive sessions at its discretion and with consent of the grievant when considering such grievances.

B. In the case of conflicts between the School Council and Dean over a major policy, the Judicial Committee recommends:

1. That the Judicial Committee decide first whether or not the conflict involves a major policy issue.

2. That its role be confined to managing the conflict resolution procedures rather than resolving the conflict itself.

3. That spokesmen for all points of view present their positions to a special session of the Education Assembly called by the Judicial Committee if, after meeting with the Ombudsman, it becomes clear to the Judicial Committee that the conflict is too broad or too deep to be resolved through his offices.

4. That the Judicial Committee attempt to resolve the conflict through the following voting procedure:

a. That congruent majority votes of the School faculty meeting separately, and the Education Assembly, faculty included, be regarded as final determinants of such conflicts.

*N.B. Any member of the Community may bring a conflict to the Ombudsman for resolutions even if he is not an immediate party to the conflict.

b. That if congruence is not found in these votes, the issue will then go to the Judicial Committee for final resolution.

C. The Judicial Committee will create, and inform the School Council and Community of, its working procedures as specified by the Constitution (Article IX, Sect. D)

Arbitration procedures will be examined and discussed, and presented to the Community, the School Council, and the Executive Committee.

APPENDIX E

UNIVERSITY OF MASSACHUSET

MEMORANDUM

From Graduate Faculty Assembly Date April 7, 1970

To School Council

Subject Motions passed in Graduate Assembly meeting, April 7, 1970

PH.D. MOTIONS:

VOTED:

1. Admissions: Admission procedures will be the same as for Ed.D. (GPA, GRE, and recommendations).

2. Guidance Committee: The Ph.D. Guidance Committee will consist of three graduate faculty members, one of whom must be a faculty member outside the School of Education.

3. Program: The candidate's program will be developed in consultation with a 3-man committee.* The Ph.D. degree program must include a minor field of study outside the School of Education unless the candidate already holds a Master's degree in a field of study outside the School of Education. The Ph.D. candidate will be required to demonstrate competence in the use of at least two research tools appropriate to his area of expertise (foreign language, research methodology, statistics or computer technology) prior to taking the comprehensive exam.

4. Comprehensive Exam: At least one of the five members of the Ph.D. Comprehensive Examination Committee will be a member of a University school or department outside the School of Education.

5. Dissertation Committee: At least one of the three members of the Ph.D. Dissertation Committee will be a member of a University school or department outside the School of Education.

6. Dissertation: The Ph.D. candidate will write a dissertation that will represent scholarly inquiry into some aspect of education and may consist of either an experimental investigation or a critical analysis of a field of study or of a field of educational practice.

7. Final Oral Exam: The final oral exam will be consistent with University policy.

*Ph.D. Guidance Committee.

Ed.D. Motions:

VOTED: 1. The Ed.D. candidate will be expected to either write a traditional dissertation or to define, plan, implement and document a project of major educational significance. This project will provide evidence of the candidate's capacity:

-To identify and analyze educational needs, problems, or critical issues;
-To propose new approaches to those needs, solutions to problems, or alternative ways of conceptualizing means of dealing with critical issues;
-To plan and implement a course of action that will deal with the need, problem, or iddue under consideration; and,
-To relate the course of action to the existing theoretical contributions and empirical efforts of others.

The documentation of this project will represent a contribution to knowledge worthy of dissemination in writing and/or other recorded media.

2. That one means of fulfilling the dissertation/project requirement is through a team dissertation or team project. In order to use a team effort to fulfill this requirement, each participating candidate must demonstrate to his individual dissertation or project committee that he has achieved the competencies normally required for a student completing a solo dissertation or project, and that he comprehends all parts of the team effort to the extent that he can interpret everything included in the documentation.

APPENDIX F

UNIVERSITY OF MASSACHUSETTS

MEMORANDUM

From Committee on Admissions Date April 15, 1970

To Hap Peelle, Earl Seidman, and Richard Ulin
School Council

Subject Report on work of Committee on Admissions

I. Operating Rationale.

The Committee viewed its task as one of balancing center and program requests against a total School context and arriving at a number of graduate student admissions which reflected a reasonable response to both pressures. The Committee's discussions and decisions took place in the context of trying to carry out the will of the Graduate Faculty Assembly and the School Council.

II. Table of Centers, Programs, and Non-Center Requests and Allocations of Doctoral Admissions.

	Requested	Allocated
Aesthetics	20	5
Counseling	15	10
Research	30	10*
Humanistic	4	5
Innovations	15	5
International	5	5
Leadership	13	15
Media	5	5
Foundations	7	7
Teacher Education	37	20
Urban	12	10
Early Childhood	2	2
Higher Education	10	8
Vocational Education	15	7
Reading	15	4
Non-Center 50% of total	102	10
	205 + 102 Non-Center	
Totals	307	128**
Dwight's wild cards		5

*The Committee has stated its readiness to negotiate quotas up or down. Research was viewed by the Committee as reflecting a special situation. The number 10 which was allocated to them was a number that we felt was reasonable for counting as we viewed the total School context. The intent of the Committee was to freely negotiate beyond the 10 as Research found candidates which met their entrance requirements. The original intent of the Committee was that we were prepared to go up to the number 30, although we felt that given the number of applicants in the Smerd area, their highly monitored admissions process, and the probable limitation of financial aid throughout the School for new doctoral candidates that the number 30 would not be reached. And that 10 was closer to the anticipated number to be actually admitted (and enrolled).

Unfortunately, mainly due to the lack of proper communications, the intent of the Committee was misconstrued and has generated some perturbation on some members of the Smerd area. The Committee's intent was to generate somewhat different feelings and perceptions.

The Committee is prepared to operate on its original premises vis a vis Smerd or even to suggest that Smerd have no quotas set for it at all; namely, that the only limitation on Smerd for admissions for the 1970-71 academic year be their own internal criteria. The Committee request advice from the School Council on this matter.

**30 Doctoral candidates were admitted before the freeze on admissions. Of these 30, 16 have to this date indicated their intention to accept this admission. Approximately three have already written to say they are not coming. And the remaining have not indicated their intentions.

III. Some questions on which the Committee seeks the advice of the School Council.

The original mandate from the School Council and the intent of the Committee was to negotiate individual cases that fell beyond the quota of a center, program, or non-center. One goal of the Committee was to assure the School that no outstanding candidates would be lost because of a quota which in the final analysis, although hopefully reasonable, is still somewhat arbitrary. One sentiment expressed by the Committee was that one major problem of admissions was one of faculty willingness and ability to take responsibility for a candidate. The Committee felt that that factor might be a decisive factor (in addition to the quality of the candidate) to take into consideration in negotiating the individual cases beyond the quotas. It was felt that some centers might have difficulty filling their quotas because of the projected limited financial aid to new doctoral students and time constraints.

The Committee, in taking this stance, was also operating within the context of the School Council's reluctance to set an arbitrary figure beyond which there shall be absolutely no admissions. The Committee's intent was and still is to control the number of new admissions according to the wishes of the Graduate Faculty and the School Council.

Questions:

1) Such a stance as outlined above might result in admissions higher than the 128 allocated by the Committee. Does the School Council at this time wish to recommend a number beyond which there will be no admissions (no matter what extenuating circumstances arise) and all negotiations cease?

2) What is the School Council's advice relative to centers who do not fill their allocated quotas by any given date?

   Alternative A. The positions evaporate and are lost to the centers and to the School.

   Alternative B. That after a certain date (e.g., 10 days after assistantships are awarded) the center, program or non-center turn in positions they were not able

to fill and the Committee negotiate for these positions with other centers who have filled their quotas and want to go beyond it.

Alternative C. That the Committee act in its best judgement without explicit guidelines from the School Council on this matter.

Alternative D. New wisdom of the School Council.

Section III:

Definition:

A Program is a group activity within the School that has applied to the Center Review Committee for Program status, has demonstrated to the Committee that it satisfies the criteria below, and has been voted a Program by the Committee. A Program can represent that it is an official activity of the total School community, although it cannot represent its importance as equivalent to that of a Center.

A Warning: NO GROUP MAY CALL ITSELF A CENTER OR A PROGRAM AFTER SEPTEMBER 1970 UNLESS IT HAS OFFICIALLY ATTAINED THAT STATUS.

Evaluation and Implementation:

The Center Review Committee shall review existing Programs yearly to ensure that they are satisfying the criteria listed below, and shall declare that a group receive program status if the group has demonstrated to the Committee its ability to satisfy the criteria listed below and has been approved by the Dean. All criteria must be satisfied to ensure Program status. Should an existing Program fail to satisfy some of the criteria in its evaluation, two months probation will be given for the remaining criteria to be satisfied. If at the end of this period criteria are still unsatisfied, the Committee may at its discretion remove Program status from the group.

Criteria:

1) Information shall be distributed by a Program on its activities, relationships with other groups, service offerings, staff, and graduate students.

2) Programs shall teach at least one course, or offer an equivalent number of modular experiences, unless the Program can demonstrate to the satisfaction of the Committee that its activities are not amenable to this form of dissemination.

3) A Program shall be fiscally and programmatically responsible for the expenditure of all funds.

4) Competing Programs shall submit a comparative model to the Committee to demonstrate that they are in fact alternatives.

5) Programs shall contain at least five members of the School of Education community (any level). A person can be a member of any number of Programs.

6) The Center Review Committee shall report to the School Council on programs that have received official program status.

Initial Implementation:

All Programs officially declared Programs by the School Community last year shall be given automatic Program status until their first evaluation.

All official Center Programs (made official by written declaration of a Center to the Committee) shall be given automatic Program status and will not ordinarily be evaluated at all, since scrutiny of their activities will take place during evaluation of the Center.

Resources:

Although this is not specifically within the mandate, the Committee recommends that each Program outside of official Center Programs (which have their own resources) be given a guaranteed annual minimum level of resources sufficient that they can meet Criteria #1.

Section I:

Evaluation and Implementation:

The School Council shall establish a standing Center Review Committee, which will review existing Centers periodically to ensure that they are satisfying the criteria listed below, and which will recommend to the Council that a group receive Center status if the group has demonstrated to the Committee its ability to satisfy the criteria listed below. The Committee will evaluate all existing Centers at least once yearly and will require them to submit as part of their evaluation a three year written plan for their future activities, with a budget attached for the coming year. This three year written plan will include a detailed rationale of the Center's activities in light of overall School goals and commitments.

If a group within the School petitions the Committee for Center status, the Committee shall evaluate the activities and plans of the group to see if they satisfy the criteria listed below. If the group is not now capable of satisfying the criteria, but could with an increased level of fiscal support (such as the level received by already established Centers), the Committee shall report this to the Council with a recommendation that the group be allocated Center level funding on a probationary basis. Within a reasonable time period after the funding increase is granted (if it is granted), the Committee will re-evaluate the group to see if it now satisfies the criteria. If so, the Committee will recommend to the Dean and the Council that the group be granted Center status; "Center status is granted when the Dean and the Council concur." If the group has not satisfied the criteria within six School months despite the increased funding, the Committee may, at its discretion, recommend that the additional funding be withdrawn and the group be denied Center status at this time. All criteria listed must be satisfied to ensure Center status. Should an existing Center fail to satisfy some of the criteria in its evaluation, two months probation will be given for the remaining criteria to be satisfied. If at the end of this period criteria are still unsatisfied, the Committee may, at its discretion, recommend to the Council that the Center's status be discontinued. The Center Review Committee shall consist of no more than five people, of which no two shall be from the same Center and at least one shall be from the Non-Center.

Criteria:

The following criteria are divided into five categories: academic, admissions, financial, administration, and inter-Center communication and collaboration. In addition, a minimum personnel pre-requisite is listed.

Academic Criteria:

1) information shall be distributed by a Center on its programs, relationships with other groups, service offerings, staff, and graduate students in Center programs.

2) a set of educational experiences (graduate and undergraduate) shall be provided which the Center and the Assistant Dean for Academic Affairs agree provide a reasonable continuum of knowledge in the Center's sphere of interest. A Center shall provide [all necessary service courses in its sphere of interest for teacher education;] should it lack sufficient faculty for this, the School Council should be petitioned.

APPENDIX G [b]

3) a graduate concentration shall be offered, and an undergraduate concentration (in co-operation with Teacher Education, when appropriate, usually shall also be offered. Counseling and full sponsorship (if necessary) shall be provided for Center degree candidates by the Center, including candidates for uncertified degrees in the Center's sphere of interest.

Admissions Criteria:

Minimal criteria for admission to Center programs shall be published. Each Center will determine the maximum number of students it can handle effectively and not exceed that number in admissions. This shall be evaluated along the guidelines established for admissions by the Graduate Assembly.

Financial Criteria:

A Center shall conduct an annual needs analysis and submit to the School Council a plan with budget to meet these needs. A Center shall be fiscally and programatically accountable for the expenditure of all funds.

Administrative Criteria:

A Center shall provide responsible administration, as outlined in University policy, for all its official programs, for its planning, and for its staff recruiting and personnel action.

Inter-Center Criteria:

A Center shall have responsibility for substantive collaboration with at least one other Center. A Center shall have joint responsibility for joint programs with other Centers. Competing Center programs shall be compared by the Centers involved with a comparative model formulated and included with the budget requests of each, to ensure that the programs are alternatives. A Center shall provide consultation and academic collaboration within its sphere of interest to other Centers on request, unless sufficient cause can be demonstrated that this conflicts with Center priorities. It is recognized that faculty members have individual priorities, but by joining a Center they accept responsibility for Center priorities as well; a Center with overburdened faculty members should petition for more or reduce its scope of extra-responsibility projects.

Minimum Personnel:

Each Center shall have the commitment of at least two hard money faculty positions and the guarantee of at least 2 total faculty positions, of which at least one position will be at the assistant, associate, or full professor level. No two Centers can claim the same faculty member to satisfy this criterion. This requirement ensures continuity, administrative responsibility, and degree sponsorship capability.

Although this is not specifically within the scope of the mandate, the Committee recommends to the Council that each Center be given a guaranteed annual minimum level of resources in order to encourage them to meet the criteria; some suggestions as to minimum resources are:

1) a seat on the School Council (already provided for in the Constitution).

2) control of Center graduate admissions subject to review by an agency designated by the Graduate Assembly and ratified by the School Council.

APPENDIX G [b]

3) some minimum fiscal pool. Fiscal resources above this minimum (which is equal for all Centers) would be negotiated with the appropriate agency.

Initial Implementation:

The Center Review Committee, if this set of criteria is implemented, will make its first formal evaluation in February, 1971. Before that time, all existing Centers would prepare to meet the new criteria; the three emerging Centers (Higher Education, Early Childhood, and Voc-Tech) would be granted probationary Center status with the same privileges as other Centers until the evaluation.

Rationale for the Criteria:

This set of criteria gives Centers a large degree of power and resources within the School, while ensuring that responsibilities commensurate with that power are met. This set confirms present School policy in recognizing the commitment of the School to existing Centers and makes it correspondingly harder for additional Centers to form.

Probable Effects of Implementation:

Commitments that the School has already made, both internally and externally, will be realized because support of existing Centers in guaranteed in these criteria. Centers will have to concern themselves more with School responsibilities than some have up to this point.

New commitments and new priorities will be more difficult to implement. The structure generated by these criteria is both highly stable and highly self-perpetuating.

UNIVERSITY OF MASSACHUSETTS

MEMORANDUM

From Ray Budde Date April 16, 1970

To School Council

Subject Proposed budget guidelines

In accordance with the constitution, Dean Roop is presenting the Administration's budget guidelines to the Council.

The Council's Budget Guidelines Committee has worked closely with her in the development of these guidelines. It fully supports the final draft of the guidelines.

It is the responsibility of the Administration and not the Committee to process requests for money on the basis of the guidelines. Accordingly, we would suggest that the Council do one of two things with reference to its Budget Guidelines Committee:

1. Dismiss the committee. Its work has been completed.

2. Place the committee on a standby basis so that either Dean Roop or the Council can have the committee as a "sounding board" as the guidelines go into effect.

Ray Budde, Chairman
Nat French
Jim Fortune
Cornell Lewis
Lyman Brainerd

Budget Committee

Recommendations

Committee Operation: Charter of Committee

Ray Budde
Nat French
Lyman Brainerd
Jim Fortune
Cornell Lewis

To consider policy questions concerning allocation of School of Education funds as suggested by members of the School community for approval by the School Council and recommendation to the Administration. The Executive Committee recognizes that the primary responsibility for the budget rests with the Administration, but feels that the School Council rightfully should present opinions on the allocation of funds for the consideration of the Administration.

BUDGETING PROCEDURES

Who establishes the budget?

1. Center and Non-Center Directors
2. Deans
3. Coordinator of Support Services
4. Individual requests with the approval of the Assistant Dean for Academic Affairs
5. School Council, with recommendations on resource allocation

How the budget is established

1. Center and Non-Center Directors, Deans, and Coordinator of Support Services submit needs and rationale.
2. Assistant Dean for Administration prepares initial budget request.
3. Present initial request to Center and Non-Center Directors, Deans and Coordinator of Support Services to determine realistic budget request.
4. Assistant Dean for Administration prepares final budget request.
5. Report budget request to School Council for information and approval of program priorities.
6. Submit budget request to Chancellor.

When the budget is established

1. Obtain initial requests by November 15.
2. Review and revise initial budget request with Center and Non-Center Directors, Deans, Coordinator of Support Services by December 15.
3. Prepare and review final budget request by January 15.
4. Present final budget request to School Council by February 15.
5. Submit final budget request to Chancellor by April 15.

NOTE: * indicates items quoted from the Constitution.

I. Applicable to all budgets and funds:

A. Responsibilities.

1.* The Dean shall make recommendations to the School Council concerning the School's budget, substantial reallocations that may be required, and guidelines for the expenditure of state funds. I-B-(1)

2.* The School Council shall be the primary policy-making body of the School. It shall have specific responsibility for personnel policy, academic matters (not assigned to the Graduate Assembly), program development, priorities, and resource allocation. II-A-(1)

B. Control.

1. All matters pertaining to budgeting and expenditure of funds are non-confidential and open to examination by any member of the Educational Assembly.

2. At least once a semester the Assistant Dean for Administration will publish a detailed summary of the budgets, encumbrances, and expenditures for funds of all projects and programs in the School.

3. On an appointment basis, the Assistant Dean for Administration will respond to individual requests by any member of the Educational Assembly for information about budgets, encumbrances, and expenditures for any School fund.

4. The Assistant Dean for Administration consulting with the School Council will establish procedures which will insure that resources available for such things as computer time, secretarial services, Xeroxing and duplicating, travel, telephoning and mailing are properly used.

5. An individual or program or center group may incur financial obligation to the School only by functioning within the governance and budgeting procedures of the School.

C. Program Budgeting.

1.* It is recommended that the proposed budget be in program terms as well as line items. I-B-(2), Footnote 2(1)

2. In coordination with the efforts to establish goals for and evaluate centers, the Assistant Dean for Administration will work toward establishing a program budget.

II. State Funds:

A. Responsibilities.

1.* The Dean shall make recommendations to the School Council concerning the School's budget, substantial reallocations that may be required, and guidelines for the expenditure of state funds. I-B-(1)

2.* The Dean shall be responsible for reporting to the School Council how state funds were spent and any proposed budget cuts which might jeopardize approved programs. I-B-(2)

3. Transfer of state funds from one account to another might be done in rare occasions by the School Council with the approval of the Dean and the Treasurer's Office of the University.

4. The School Council has the responsibility on request to furnish small operating funds to itself and its Executive Committee, the Graduate Assembly and its Executive Committee, the Educational Assembly, the Ombudsman, and any other duly authorized person or group which is established to expedite the general operation of the School. (Amount to be negotiated).

B. Support of Centers and Non-Centers

1.* The learning Centers represent a major commitment of the School of Education to the purposes of these centers, to further these purposes and to promote diversity and experimentation, each center shall have substantial autonomy in organization and governance and in the development, evaluation and revision of its programs, except as they significantly affect other centers or the School as a whole. VIII-A

II. State Funds, cont'd.:

3.* Special Programs: Special Programs are small or experimental educational ventures by student/faculty interest groups that are given provisional recognition by the School of Education for up to two years. The School Council shall publish flexible procedures and guidelines for the establishment of such programs which shall operate under a renewable charter. The Council shall also establish procedures and criteria for the annual evaluation of Special Programs and for determining when Special Programs can qualify for center status. VIII-C

4.* An Experimental Fund: To encourage continuing experimentation and innovation at the School of Education, the Dean shall budget a sum each year to support experimental programs that could not find support in any of the established centers. Procedures and criteria for making grants from the Experimental Fund shall be recommended by a special School committee.

5. Until such time as a program budget is established and Centers are supported on an individual basis, "it is recommended that the Experimental Fund be allocated a minimum of $10,000 each year".

6. The Non-Center will use the same guidelines as Centers with regard to budget.

C. Support of Faculty Individually.

1. Provision should be made in each budget for the support of faculty on an individual basis.

2.* If Centers are allocated support budgets, the Experimental Fund should be budgeted a sum equal to at least 10% of the total support budget of all the centers. Until such time, it is recommended that the Experimental Fund be allocated a minimum of $10,000 each year. While center members should not be prohibited from receiving grants from the fund, it is recommended that a majority of the committee that recommends procedures for the operation of the Fund should not be members of any center.

III. Discretionary Funds.

A. Discretionary funds such as the Dean's Executive Budget may be spent by the person or group at the discretion (choice) of the person or group. An accounting of the expenditure must be made to the School Council. This will be done at least once a semester.

B. The executive budget of the Dean has two sources for funds: a negotiated amount out of state funds plus whatever funds may accrue to the Dean from other income sources.

C. The School recognizes the action of the Dean in adding money to his Executive Budget from resources which have resulted from his own professional efforts.

D.* The Dean shall have an executive budget to be used at his discretion for general support purposes. The amount of the Budget shall be negotiated each year between the Dean and the School Council or its designated committee, but it shall not exceed 10% of the School's general support funds. The Dean shall account to the School Council each year for his expenditures under his budget. I-D-(1)

E. The Dean has requested to have the Assistant Dean for Administration be responsible with him for the use of funds in the Executive Budget.

IV. Project Funds.

A.* The Dean will assist faculty and students in the development and funding of educational projects in cooperation with government agencies, foundations, and university officials. To insure appropriate coordination, quality, and communication concerning proposals and commitments by the School:

(1) Requests and proposals up to $200,000 must be approved by the Dean and reported to the School Council.

(2) Request and proposals for amounts over $200,000 must be approved by the Dean and the School Council.[1]

(3) Any requests or proposals that are substantially changed in regard to budget or program must be reapproved by the Dean and/or School Council as required above.

B.* While the Dean's Office should approve budgets, it should not be able to expend project funds without the approval of the project director. I-B-(2), Footnote 2(2)

C. Transfer of project funds from one account to another may be done by the Dean and the project directors concerned.

D. The Assistant Dean for Administration will work with project directors to set up procedures to insure that all project expenses mentioned in the grant budget are charged to project funds rather than "hard money" state funds.

1.* This procedure would give the Dean and those designated by him to represent the School discretion and flexibility concerning smaller commitments and insure fuller review and coordination concerning larger amounts. The idea is to make the review procedure commensurate with the size of the potential commitment.

Appendix 1

FINANCIAL AID COMMITTEE REPORT FOR GRADUATE FACULTY ASSEMBLY

Introductory Comments

Money has a critical importance for most graduate students in the School of Education. Often full time attendance depends upon financial aid. Furthermore, assistance normally involves a responsibility for certain tasks, which should foster a student's learning.

At the same time, the achievements of the School of Education largely depend upon labor by graduate students. Most projects and research as well as substantial amount of instruction for undergraduates rely upon assistants. In turn, those services performed bring forth the income to support students.

The personnel office function of matching graduate student interests with project director needs is not an easy one. A considerable amount of information -- both formal and informal -- is essential; and still the School should anticipate persistent efforts to improve the matching of available funds to available students.

Money comes from a large number of sources -- carrying varying duties and responsibilities. Approximately two thirds of current support comes from special projects. Aptly labelled soft money, such funds depend from year to year upon the proposals submitted by the School and the current policies of foundations, funding agencies, and local schools. Soft money assistantships are for the purposes specified in the funded proposal, and thus directors have a strong incentive to locate capable and interested students.

About forty assistantships are now provided from University funds, half for teacher supervision and half for teaching assistants. The School has requested substantially more such hard money to correspond with larger enrollments. The supervision funds are allocated to the Center for Teacher Education for supervision of practice teachers and interns. The remaining money goes to other Centers for teaching assistants.

Other fellowships are available, and graduate students are urged to seek out such support. The School can recommend some student for a University Fellowship and an NDEA award; but, in general, individuals must find appropriate sources by reading bulletins and checking with faculty members in areas of their interest.

These introductory comments indicate some of the complexity of and limitations on financial aid. Thus the Financial Aid Committee recommends a three fold response: first, procedural matters; second, a statement of policy; and, third, a series of proposals for the guidance of center and program directors as well as the deans.

Procedural Matters

The School should distribute information about possible support as completely and widely as possible so that stipends are not awarded on the basis of chance encounters in the hallway. Each center director and project head should publicize his possible needs and seek information about as many potential candidates as possible.

The major responsibility for consistent, open information will continue to fall on the office of the Assistant Academic Dean. A list of assistantships such as distributed by Earl Seidman on January 12, 1970 should be prepared and distributed each spring, together with a brief statement informing students of the process and of any anticipated changes for the following year. Graduate students seeking a renewal of support should indicate their preferences.

That formal process should also stimulate a series of informal contacts which can improve the match of supply and demand.

As a final procedural matter, the Financial Aid Committee recommends that as many decisions as possible be made by April 20th of each year.

Motion: In order to facilitate the dissemination of information, the Assistant Academic Dean shall distribute a list of current assistantships each spring, that list shall also include available information about projects which will be funded or dropped during the following year. Enrollment students should indicate their preferences as a first step in matching interests to sources of funds. To the extent possible, graduate students should be informed about financial aid by April 20th.

Statement of Policy

As a School policy, all stipends within its choice should be for services performed and graduate assistants should be responsible to Center and project directors. The Financial Aid Committee concurs in the current distribution of soft money to the project director, supervisory support to the Center for Teacher Education, and teaching assistantships to other Centers.*

Motion on General Policy: Since most stipends are granted for services performed, the person in charge -- whether a dean, a Center Director, a project, or a program director -- should have major responsibility in selecting personnel for his (or her) operation. Such directors should publicize their personnel needs and consult with the Assistant Academic Dean. Hard money assistantship positions would be allocated by the Graduate Financial Aid Committee, Assistant Dean for Academic Affairs, and Director of Graduate Studies working in concert.

Finally, the Financial Aid Committee recommends approval of the following proposals for the guidance of Center and project directors as well as the Assistant Academic Dean. These propositions are intended not as rigid rules but as an expression of the School's current choices and priorities. The Committee has attempted to cover certain problems which have come to our attention, but this section should be subject to modifications as different problems and concerns elicit new advice.

1. If students are suited for a position, preference should be given to second and third year students over in-coming persons. Doctoral students have preference over master's candidates. Doctoral students who have established their advisoral committee and are in normal course toward a degree should have preference over others. Planning doctoral students as well as others should not expect aid for a fourth year (or third if a master's equivalent was counted.)

*Several members of the Committee believed every Center should be involved in training teachers, but that change is not best handled at this time in this report.

2. Normally stipends are granted for a year and students are responsible for approximately twenty hours of work for thirty two weeks. Usually the time on duty should be worked out cooperatively between a student and the person in charge. Occasionally disagreements will result and switching should be faciliated when mutually satisfactory. Since no students except planning students have any precommitment for support and since stipends cannot be based on a time card basis, (and since the major aim of all projects must be to further learning) the major control over irresponsible or inadequate service should be a withdrawal of support in the following year. Center directors and program heads are encouraged to inform the Assistant Dean about individuals who have performed unsatisfactorily under current stipends.

3. Essentially the only funds not specified for a definite location in advance is the $60,000 -- and hopefully more -- available for teaching assistantships.

Because the School has often expressed its concern for Black and minority enrollment and a high priority for urban education and because those commitments are not otherwise reflected in the School budget, at least five assistantships should be designated for Black or minority students.

The remaining stipends should be distributed according to teaching load. As much as possible each Center should be assigned at least one stipend.

4. The Martin Luther King fund should be activated for the next school year (1970-71). The King Fellow should be selected by the Assistant Academic Dean in consultation with Black faculty members from those candidates who submit a brief (one hundred word) application. Candidates should be Black and in the final stages of their doctoral work, and the award should contribute toward the rapid completion of the degree work.

Respectfully submitted by
The Financial Aid Committee

Byrd Jones, Chairman
Richard Coffing
Art Eve
Phyllis Roop
Ron Smith

S C H O O L O F E N G I N E E R I N G

ANNUAL REPORT

FY 1969-70

UNIVERISTY OF MASSACHUSETTS

AMHERST, MASSACHUSETTS

July, 1970

ANNUAL REPORT

SCHOOL OF ENGINEERING

UNIVERSITY OF MASSACHUSETTS

1969-70

I Introduction

The statistical data requested by the Secretary of the University has been placed in the appendices as follows:

Appendix I - Appropriation Data

Appendix II - Personnel Data and Organization Chart

Appendix III - Students Served

Appendix IV - Professional Activities of the Faculty

The format of this year's report, as in the past four years, contains accomplishments of the School, faculty recognition, planning and finally, problems of concern to the School.

II Accomplishments

By far the most exciting and rewarding event of the past year was the naming of the main engineering building for Dean Emeritus George Marston. An excellent symposium was presented in association with the dedication ceremony and a great talk by President Eric Walker of Penn State University. The School is particularly grateful to the Trustees of the University of Massachusetts for approving the naming of the building as an exception to the policy that buildings cannot be named for persons still living.

1. Undergraduate Program

FRESHMAN ENGINEERING - The Basic Engineering program was dropped in June, 1969. In the fall of 1969 all students took Engineering 104. The faculty to staff Engineering 104 was contributed by the five engineering departments. In the spring of 1970, students were given their choice of a section of Engineering 103, taught by professors of the five major departments. The 103 sections were designated so that the student could enter a section which he thought he was interested in and were taught by a department professor. This program was moderately successful for exciting and stimulating some of the students. However, it gave them a limited exposure to other branches of engineering. To overcome this weakness and to give the students an opportunity to learn

more about several branches of engineering, in the fall we will use a modular approach and break the Introduction to Engineering into three modules. The freshman engineering class of 1970-71 has been divided into two approximately equal groups. One-half of the class in the fall will be enrolled in Engineering 103 and the other half in Engineering 104. The fall and spring semester will be divided into three equal parts and six blocks or modules for the academic year.

A new undergraduate program leading to the Batchelor of Science degree in Computer Systems Engineering was formulated by the faculty in the Department of Electrical Engineering in cooperation with the faculty of the Computer Science Program. The Commonwealth is a leading center of the electonic data processing industry and demand for graduates of such a program therefore should remain high. The recognition by the faculty of a state and national need for capable well-trained engineers in one of the Nation's most important industries is indeed noteworthy. The program will focus on developing engineers needed to develop, design, program and utilize the computer system in information processing.

The Department of Civil Engineering is developing a new, considerably improved and modernized fluids laboratory. In addition, they report that two Massachusetts Highway Association Fellowships, an Institute of Traffic Engineer's Scholarship (one of four in the U.S.) and an ASCE Student Chapter Scholarship (again, one of four in the U.S.) have been awarded to students in the Department.

The Department of Chemical Engineering has developed interest in, and support for, industrially-oriented cooperative research programs which involve both graduate and undergraduate students.

The Department of Mechanical and Aerospace Engineering offered a new senior course in design engineering which was conceived as project type course in which projects are selected because they are real and socially relevant. Students undertook to design recreational equipment for retarded children at the Belchertown State School. The designs were reviewed by the Belchertown staff and those selected will be converted to actual hardware in the very near future for installation.

Professor Dixon offered a new course on the subject of Technology and Society as a senior elective in Mechanical and Aerospace Engineering. The course consisted of weekly seminars and covered the criticisms of technology, the future of technology and the personal, professional, moral,and ethical aspects of technology and society.

A materials major in the Department of Mechanical and Aerospace Engineering was initiated in the Fall of 1968. The core curriculum is comprised of courses offered in Mechanical and Aerospace Engineering, Electrical Engineering, Chemical Engineering and the

Chemistry Departments. Electives may be chosen from these Departments and also the Polymer Science and Engineering, Physics, and Wood Technology Departments.

With support from an NSF grant to Drs. Boothroyd and Zinsmeister, two undergraduates worked with the faculty on research during the summer of 1969 and four more are working this summer.

COMTECH continued to participate in the operation of a pilot undergraduate cooperative work-study program with major assistance from Professor Robert K. Patterson.

The first group of five seniors graduated from the program with the May, 1970 Class. Sixteen engineering students are currently enrolled. Enlargement to include the School of Business Administration has been undertaken although no placements were achieved by the School following recruitment. This was part of an effort to triple the program this spring. Extremely adverse placement conditions prevail currently although there is the promise of substantial industrial interest in our program.

Much liaison effort lies ahead to develop positions in advance of student recruitment, and the effort must be extended to business institutions and to public agencies to involve students in public sector problems and activities. This is an area of important potential for work opportunities as well as for student interests. Hopefully, students will be drawn into the program from the humanities and the liberal arts as well as from the sciences, engineering and business programs.

A position paper representing the experiences and proposed plans of the School of Engineering has been transmitted to the Provost's Office for dialog within the larger University.

Although our request for Office of Education support of the Coop Program was not approved in FY'70, a proposal will be submitted in FY'71 for funds to enable the development and formalization of an adequately administered program.

Under the guidance of Associate Dean Marcus and a student committee, the IAESTE Program continues to flourish. Because of the tight employment situation this summer, the program did suffer a small reduction in size from fourteen to nine students. Thirteen students applied but only nine were placed as follows:

Denmark	3	Ireland	1
Austria	1	England	1
Greece	1	Germany	2

Of the nine students in the program, six are Engineering majors and three are Chemistry majors.

Student-faculty relations were given a great deal of attention in all Departments and in the office of the Dean during the past year due to the many disruptions that occurred on our campus. Although many of the engineering faculty were concerned about the disruptions, the writer's opinion is that greater exchange of ideas and opinions took place between students and faculty members this past year than in any of the past four years. Departments are now considering questions of student involvement in teaching evaluation, decision making, et cetera, which is indeed a healthy development.

Major laboratory improvements are underway in all departments. Funding for new laboratory equipment has come primarily from grants from the National Science Foundation which must be matched with State funds. This past year grants were awarded to Professor Robert Glorioso in the Department of Electrical Engineering for $25,000 and Professor G. Albert Russell in the Department of Mechanical and Aerospace Engineering for $16,500. The Foundation has decided to terminate its program of developing undergraduate laboratories in FY'70. Unfortunately this comes at a poor time for the School since greater efforts are needed to develop new laboratories and to upgrade old labs. Greater State support for laboratory equipment will be needed in the years to come if we are to achieve the status of a quality engineering school.

2. Graduate Programs

The growth rate of graduate enrollment in the School of Engineering decreased this past year although there was a growth of about ten students. This was expected and in fact, in our more pessimistic moments we were afraid of a decrease in the number of graduate students in the School. The Executive Council of the School agreed that we would not increase the number of foreign students and would hope that we might be able to recruit U. S. males in fierce competition with other engineering schools. This was done to the credit of all the Departments in the School. The significance of our success can best be appreciated when one realizes that thirty-six per cent of all first year engineering graduate students in the Nation last year were foreign.

The Herculean efforts of the Department of Chemical Engineering should be singled out for compliments since they were more successful in recruiting U. S. graduate students than the leading schools in the Nation and the Department has gained great stature in the profession for that feat.

The outlook for the coming fall is extremely encouraging and the number of students in the School will be limited only by the support available. A substantial increase in quality of student is also anticipated. The reason for the bright picture is a simple one -- occupational draft deferments were eliminated by President Nixon last spring. Graduates of engineering schools have been seeking industrial deferments for the past two or three years and usually received them. Many of these young men continued their education on a part-time basis but now are returning to the campus full-time. The large number of students eager to return to the University will aid us by bringing our growth rate back to the level of two years ago. It is now necessary for the faculty to attract more research support which can provide student stipends and for the University to add more support for graduate students.

The directions the graduate programs of the School will take in the future must be thoroughly discussed by the faculty in the coming year. Although our graduate students all found positions which were exciting and interesting, the number of offers each received was considerably lower than past years. Many recruiters expressed preference for batchelors' degrees over advanced degrees because of lower cost and other reasons, some valid and some questionable. It is perfectly clear to the writer that a national shift in priorities is taking place and that research activity at Universities as we have known it must either change or be drastically curtailed. Federal agencies, including the National Science Foundation, are becoming more and more mission oriented and the mission is to solve the problems of our society. Since society's problems have only subsets of problems which are technologically solvable, we must find ways to develop interdisciplinary teams to study the entire problem. It may also require a new kind of engineering doctorate to focus attention on mission oriented problems.

A proposal to the Graduate School for establishment of a Graduate Program in aero-space engineering was prepared by a school-wide committee under the chairmanship of Dr. Poli. This proposal is now pending before the Graduate Council of the University. It was reviewed by several outstanding aero-space engineers who were most favorably impressed with the faculty and course outline, but who raised questions about the administration proposed for the interdisciplinary program. The Aero-space graduate program is modeled administratively after the Ocean Engineering program which is already established in the School.

The Aero-space graduate is being introduced because the aero-space industry is a large and important one in the Nation. It is the largest exporter of all U. S. industries and hence is extremely important to our balance of payments.

3. Research

Sponsored research continues to grow at about an increase of $200,000/year, which is indeed gratifying when one considers that federal research budgets have remained constant for the past four years, or in some cases have actually decreased. The fact that sponsored research continues to grow is evidence that a dynamic and capable faculty has been assembled in the School and that the faculty are writing excellent proposals, worthy of support. The faculty must now be supported by the University so that first-rate research results can be produced and research grant funding thereby renewed.

Project THEMIS, as it was originally conceived by the Department of Defense, has been terminated. The research the School has been carrying out in deep-sea submersibles will be continued but the sources of funding will be a different component of ONR. Our contract has been extended for another year (through 1973) but the annual funding levels have been reduced such that by 1974 it will level off to about $60,000 a year for the support of only one truly relevant project. The bright side of the coin is that our investigators are now beginning to attract support from other divisions of the Navy and our Navy support for the coming year will actually exceed the support of any of the past three years. We are hopeful that this will continue to be the case.

An excellent conference was held in Amherst with our colleagues from the University of Notre Dame and the Navy. Industrial participation was not invited since we wanted to make certain that the group was sufficiently small to facilitate real communication and interaction. It is planned to continue our association in deep-sea research with Notre Dame and perhaps ask other schools to join.

Each year I have been pleased to single out one department that has made dramatic progress in research support. Last year I commented on the difficulties being experienced by the Department of Mechanical and Aerospace Engineering. I am particularly delighted this year to note the truly outstanding progress made by the faculty of that Department in attracting support. Four NSF research grants, an NSF equipment grant, a NASA grant and an Army Research Office grant have been received this past year and others are expected early this coming year. The faculty are to be recognized for spending much time and effort writing good proposals which deserved support.

Another breakthrough has been made by the Environmental Engineering Program in becoming the research arm of the Division of Water Pollution Control, Commonwealth of Massachusetts. A three-year, step funded (as our Project THEMIS was) contract for $300,000 was signed by the Division and the University. The project will support: 1) Demonstration Plant Studies on Nutrient Removal from Wastewaters by Primary Treatment, 2) Pollution of Lakes by Watercraft Exhausts, and 3) Suppression of Bottom Deposit -- Water Recycling of Nutrients in Lakes. A mobile waste water treatment plant worth over $100,000 has been given to the University to support these studies. Professor Feng and his faculty group, representing many Departments, account for nearly forty per cent of the School of Engineering research and training grants. This clearly points out that when faculty groups can focus on mission-oriented problems massive funding can be obtained.

Several departments in the School are discussing possible cooperative research agreements with industry. It is extremely important that we find ways to expand the interaction we have with industry since graduate students working on real problems of industry develop a better sense of what industry does. Furthermore, a greater variety of intellectual effort is possible since some of industry's problems may be more design-oriented than basic research. We will continue to expand our interaction with industry but we must overcome two stumbling blocks; industry's reluctance to place results on the library shelf and the need to think through patent arrangements satisfactory to the University and industry.

4. Relations with High Schools and Community Colleges

The programs the School has developed to maintain good relationships with the high schools and community colleges of the State suffered somewhat this past year due to the absence of Associate Dean Marcus who was on special duty for the University. He and Assistant Dean Ward did continue their efforts but both on a limited basis.

On April 2 and 3, 1970 the Northern New England Junior Science and Humanities Symposium was held at the University of Massachusetts. The Symposium was directed by Dean Marcus and Dean Ward. Tau Beta Pi, the Engineering Honorary society, participated in planning and conducting the conference. Fifty-seven high schools from Maine, Vermont, New Hampshire and Massachusetts were represented and the total Symposium attendance was 248 students. From this Symposium five final students were selected to attend the National Junior Science and Humanities Symposium which was held at the University of Tennessee.

The School of Engineering presented the second NSF sponsored Summer Institute on the Man Made World course for high school teachers and a few community college teachers. A proposal to support a third Institute for the summer of 1970 was not funded. This was a great

disappointment to us and an apparent surprise to the Engineering Concepts Curriculum Projects Office at the Polytechnic Institute of Brooklyn. Since only six institutes dealing with the Man Made World course are funded each year, it is understandable that shifts in geographic location of funded programs must take place.

To maintain the interest of the high schools in the Program, the School hosted a one-day conference on May 15, 1970 on the new developments in ECCP. This was attended by approximately twenty high school teachers from Massachusetts, Connecticut and New York, many of whom had participated in the previous two summer institutes offered by the School. A number of the teachers attending the conference reported that they are currently teaching the ECCP Program in their schools. Mr. Charles Camp of the Amherst Regional High School, who has made great contributions to our Institutes, moderated the discussions.

A revised brochure on curriculum changes has been distributed to our colleagues in the community colleges. Because of major changes in each of the undergraduate curricula offered by the School, we must renew efforts to inform the Community Colleges of these changes so that appropriate changes can be made in their pre-engineering work.

5. Relations with Alumni

The Engineering Alumni Association completed its first year of operation with mixed success. Approximately 350 engineering graduates enrolled as members but the annual solicitation for scholarship funds raised about $2200 which is about the level of previous years.

The nucleus of alumni members who formed the organization are continuing their activities into the second year, but this year they intend to focus their efforts in a smaller geographic area rather than attempting to coordinate a more wide-spread organization with the corresponding logistics' problem.

This is a serious, hard-working, devoted group which will continue to be encouraged. They recognize now, as they did not a year ago, that developing enthusiastic alumni response for this kind of organization is a slow process with most of the work carried out by a few.

One of the high points of the year was an engineering alumni and wives' champagne breakfast at Homecoming to which many faculty members and wives were also invited. It is planned to repeat this event again this fall.

6. Service to Industry

a) Departmental Activity

Dr. Douglas gave a short course entitled, Mathematical Modeling in Chemical Engineering, for the New Haven Section of AIChE at Yale in April, attended by approximately thirty five chemical engineers.

Dr. Lenz participated in two series of short courses on Polymer Science. One was presented by the faculty of PSE for the American Cyanamid Company in Stamford, Connecticut and for the Hooker Chemical Corporation in Niagara Falls, N.Y. The other was sponsored by the American Chemical Society and was given six times: in Berkeley, California, Rochester, N.Y., Philadelphia, Pennsylvania, New York, N.Y., Toronto, Ontario, and Washington, D. C.

Dr. Lenz also gave a UCLA Extension Short Course in August, 1969, and a short course at the University of Detroit in April, 1970.

Water Quality Control: A short course planned and presented by the Environmental Engineering Program on March 23 thru 25, 1970, with 80 registrants, ten lecturers; coordinated by Professor Kuzminski, with University faculty, Professors Adrian, Berger, DiGiano, Feng, Higgins, Kuzminski, Lindsey, and Ward, lecturing.

Project EPIC: Training for Westfield High School science teachers in the chemical analysis of water and wastewater as part of the effort to preserve the environment, January 19 thru 23, 1970, with twelve participants, four UMASS Civil Engineering faculty, Drs. Feng, DiGiano, Adrian and Kuzminski, lecturing. This was coordinated by Dr. Kuzminski.

Earthquake Engineering Graduate Science Seminar: A three-week program, June 8 thru 26, 1970, sponsored by the National Science Foundation with thirty-two participants. Seven nationally known lecturers included C. M. Duke of the University of California, L. A., G. W. Housner of the California Institute of Technology, F. E. Richart, Jr. of the University of Michigan, J. Blume, President of John Blume and Associates, and R. W. Clough of the University of California, Berkeley. Professor Nash was the Director and the Co-director was Professor White.

ASCE National Specialty Conference on Disinfection: This was held on July 8 thru 10, 1970. There were thirty-two speakers. The General Chairman was Professor Feng and the Program Chairman was Professor Kuzminski.

Summer Short Course in Water Quality Engineering: June 23-27, 1969, Edited Symposium (333 pages), directed by Professor G. R. Higgins

Dr. Boothroyd has organized well received short courses on automated assembly, taught by himself, Dr. Redford, Mr. Murch, and Professor T. O. Prenting of Marist College. These courses have been organized with the aid of the State Technical Services Act through the COMTECH Office under Dr. Howard Segool at the University of Massachusetts and were given twice last year.

In an unique and important public service function, Drs. Russell, Ambs and McGowan testified before the Massachusetts Legislature on the subject of pollution and the automobile.

Through its several programs COMTECH continued to develop University service and educational relationships with industry, commerce and business and with the educational and governmental communities both intrastate and regionally.

Technology Transfer: The technology transfer program operated by COMTECH in the capacity of Designated Agency for the Commonwealth under the State Technical Services Act continued throughout FY 1970. Funding was achieved through a combination of carryover FY 1968 and FY 1969 Federal grants and State appropriations since no new funds were made available for FY 1970. Since projects and expenditures were overlapping, Appendix V is a project recapitulation of the total program from mid - 1968 through March 31, 1970, the latest date for which summary accounting figures are readily available. Program expenditures through June 30, 1970 are estimated to total approximately $285,000 of the Federal grants and matching State appropriations for this program.

Much effort was expended during FY 1970 in cooperation with other state agencies to gain continued Congressional support for the STS program.

Unexpended previously granted funds have been extended through June 30, 1971 and the COMTECH STS program has been banked into five significant service projects all now located at the University, all with tight survival budgets. The New England Regional STS program, on the Board and Executive Committee of which the COMTECH Director served, has been suspended as of June 30, 1970, as have all new regional project commitments. The Executive Committee will continue to function on an ad hoc basis.

Ongoing intrastate projects will be maintained through June 30, 1971 in anticipation of new Federal and/or State support. A School budget request has been made in support of the Communications Service, Field Liaison Service and Technical Referral Center aspects of this program.

III Faculty

The fine accomplishments discussed previously reflect the dedication, talent and hard work of the faculty of the School. The School has a faculty of which the entire University can be proud and one can easily demonstrate that even greater accomplishments will occur in the years ahead.

There has been considerable ferment throughout the University with respect to what kind of role the faculty and students should play in University governance. Recognizing the need for the engineering faculty to develop a position of what role it should have in the affairs of the School, a committee was appointed to make recommendations to the entire faculty for discussions and action. The faculty vote approved the formation of a School Personnel Committee for a trial period of two years. The purposes of the committee are to: 1) provide additional information and assistance to the Dean and Department Heads on personnel decisions and 2) enable the faculty to have a greater voice in personnel decisions. The faculty also voted to initiate a series of monthly faculty meetings. A moderator and a secretary will be elected each year to preside over the meetings and a committee will be established to help organize the information for the meetings. One result hoped for in the first few meetings is the determination of a faculty committee structure for the School.

Personnel changes which took place in the School include the request of Associate Dean E. E. Lindsey to step up to being a full-time faculty member. Dean Lindsey's dedication to the School is well known by all and is gratefully acknowledged. His help in getting the writer broken in is indeed appreciated.

Dr. Roscoe Ward, who had been a Visiting Associate Professor and Acting Associate Dean in Associate Dean Marcus' absence, will be with us permanently as Associate Professor of Civil Engineering and Assistant Dean of Engineering. Dr. Ward has been an extremely valuable colleague the past two years and we look forward to continued association.

Associate Dean J. S. Marcus has been on leave from his office for the past year on special assignment to the University. He and two colleagues first served the Trustees by developing a new organization plan for the System which was adopted last year. The next key assignment was the reorganization of the Amherst campus. Dean Marcus will remain on leave for the next six months on a third assignment -- the organization of a new office concerned with development and related activities. Although the School's development has been diminished by his absence, we are convinced that the record will show he has made greater contributions to the University in his special assignments than those he could make in the School.

We are extremely pleased that Dr. Lester Van Atta has agreed to serve as Professor of Electrical Engineering and Associate Dean of Research on a part-time basis, beginning September 1, 1970.

Dr. Van Atta is an internationally renown engineer and has served as Director of Research for Hughes Aircraft and the Lockheed Missiles Division before assuming his most recent position as Associate Director of the Electronics Research Center, NASA, Cambridge.

The Department Heads are to be commended for their excellent recruiting which led to the following appointments:

Chemical Engineering Department

Associate Professor James R. Kittrell, Ph.D., University of Wisconsin

Civil Engineering Department

Assistant Professor Peter A. Mangarella, Ph.D., Stanford University
Assistant Professor Gerard W. Foess, Ph.D., University of Michigan
Associate Professor Clayton R. Adams, M.S., Massachusetts Institute of Technology
Associate Professor James Halitsky, Ph.D. Air Pollution, Meteorology, University of New York

Electrical Engineering Department

Assistant Professor Francis S. Hill, Ph.D., Yale University
Associate Professor K. Sigfrid Yngvesson, Ph.D., Chalmers Institute of Technology, Sweden

Industrial Engineering Department

Associate Professor Stanley Lippert, B.A., Physics, University of California, Los Angeles
Assistant Professor Hiroshi Matsuo, Ph.D., University of Massachusetts

Mechanical and Aerospace Engineering Department

Adjunct Professor Warren Snyder, Ph.D., University of Minnesota
Assistant Professor William P. Goss, Ph.D., University of Connecticut
Assistant Professor Paul E. Tartaglia, Dr.Eng., University of Detroit
Instructor Lawrence Murch, Ph.D.(expected) University of Massachusetts

The Department of Civil Engineering and the School as well have been honored by the award of an NSF Senior Foreign Scientist Fellowship to Dr. Michael Zyczkowski of Poland. Dr. Zyczkowski will hold a visiting professorship in Civil Engineering that will be funded by NSF.

The School looks forward to the return of Dr. Kenneth Cashin who has spent the past two years in developing the Chemical Engineering Department at the College of Petroleum and Minerals at Dhahran, Saudi Arabia.

Assistant Professor Denton Harris has been on sabbatical leave, working toward a Ph.D. He will continue this work at Texas A & M next year. He has been awarded an NSF Science Faculty Fellowship for fifteen months to support his study.

Professor Robert Archer is ending his second year as PHS Special Research Fellow, working on use of computers in Bio-engineering at MIT. It has been found possible to transfer to UMass computers most of the programs developed at MIT. When the new PDP-15 equipment arrives in the fall of 1970 it should be possible to build up a fairly sophisticated system for mathematical-mechanical study of biological growth.

Professor William Nash has been elected to the grade of Fellow, American Society of Mechanical Engineers.

Professor Merit White spent July, 1969 as National Academy of Sciences Exchange Scientist visiting earthquake engineering laboratories in Roumania.

Professor Colin Moodie will spend his sabbatical leave from Purdue University in the Department of Industrial Engineering where he will continue his research on the University as a complete societal system. He will teach part time as well.

Four members of the School faculty left the School this year: Professor S.N.B. Murthy resigned to enter consulting work; Professor Alan Redford, who was with us for a year as Visiting Associate Professor, returns to the University of Salford, U.K.; Assistant Professor Ronald Rubel resigned to take a post at Boston University; Mr. Richard Budynas, who served this year as an instructor, completed his doctorate and has taken a post in industry. We wish them well in their new positions.

IV Planning

Immediately following WWII the Nation focused its attention toward and allocated its resources to defense and internal development of friendly nations. Defense continued to receive major attention through the 50's and with the defense implications of the missile race, one might say that even the moon program was defense related. Engineering education and research from the post war period until just recently moved closer to the physical sciences and mathematics to provide professionals to man the programs the Nation agreed it needed.

It is becoming increasingly clear that as a Nation we are beginning to move in new directions. The Congress, reflecting the consensus of the people, is focusing on the internal problems which plague the Nation. The list of problems has been written too many times to be repeated here. What must be discussed by the engineering faculty is the implications these changes have for the future

of our School. The National Academy of Engineering, for example, held a conference in early July, 1970 entitled, Social Directions for Technology. Questions were raised by the conferees as to how engineering education could be modified for only a fraction of our students so that graduates of these programs could make meaningful contributions to the solution of some of the Nation's serious social problems. Social scientists at the conference indicated that leadership must be taken by the engineering profession since only engineers are problem-solving oriented. What is being called for is a new kind of engineer whose basic science background may well be in the social sciences and perhaps the life sciences rather than primarily in the physical sciences. His problem-solving experiences and design education is likely to be focused on the social problems of our day rather than hardware systems or devices. This is a challenge of immense proportions for engineering education and one we hope can be met by the University. New alliances with the departments of social and life sciences must be forged by a group of faculty members interested in trying to solve major, real, social problems.

One senses at the same time concern on the part of sponsoring agencies that Universities as we know them today will not be able to meet the challenge. The National Science Foundation, for example, will open its doors to supporting research proposals submitted by industry because it is well known that profit-making concerns can put together problem-solving teams which can come up with solutions by a stated time deadline.

The changing character of research support should be viewed by engineering faculties as a wonderful opportunity to really do what we claim we do, i.e., utilize materials and energy for the benefit of mankind. Changes will be necessary and we must begin planning for these changes soon.

Implications of change for the Univeristy are also evident. Time-honored, academic concepts of tenure, reward systems, free publications of results, and virtual departmental autonomy are being questioned by society, and well they should be. It is the opinion of many key industrial and governmental leaders that the University is in a crisis today because it continues to do "business as usual" while its students are demanding change and the sources of its resources are also demanding change. Change in university governance will likely lead to even greater solidification of "business as usual". The basic problem that must be solved is how to get a group of faculty members to work together on mission-oriented (i.e., problem solving) research. After ten years of trying to accomplish this kind of goal I have less wisdom to offer today than I could have easily given ten years ago, and this reflects the enthusiasm of a person ten years younger.

There is a second area that demands planning by the School of Engineering. Black engineering enrollment in the Nation is concentrated primarily in the predominately Black schools in the South. The CEEBS Program which will have attracted seven-hundred new students to our campus has resulted in two students in our School. The young, black student can make dramatically significant contributions to solving critical social problems as an engineer

but he does not recognize this. Efforts are necessary to get to the black student in junior high school to whet his interest in an engineering career so that he can begin taking appropriate high school courses. Furthermore, we must intensify our efforts to recruit larger numbers of black engineering freshmen. The School has hired one of its two CEEB's students to work with the Admission's Office as a start but we will need faculty cooperation if we are going to be successful in drastically increasing the number of black students.

PLanning continues for the new engineering laboratory building but a major interruption resulted from the executive decision not to include working drawing funds in the FY'71 budget. This is a severe blow to the planning of the School since additional space will be absolutely required in FY'73. If prefabricated space is made available in FY'71 for the School, some of the problems will be ameliorated but our need for permanent, well-designed, lab space is extremely urgent.

A Master's Program in Productive Engineering is being planned by the Department of Mechanical and Aerospace Engineering. The United States is lagging Japan and western Europe, particularly West Germany, in the area of production and manufacturing. We expect that the importance of production and manufacturing to the nation and the interest of United States industry in this field will make this one of the most important areas for engineering education and research in the next decade. Under the leadership of Dr. G. Boothroyd, the Department of Mechanical and Aerospace Engineering has made its start in establishing itself as one of the important places where this type of work is being done. During the past year, a joint committee of faculty from Mechanical and Industrial Engineering, under the chairmanship of Dr. Boothroyd, have been meeting to develop and recommend a Master's Program in Production Engineering. It is hoped that their recommendation can be developed into a complete and final program for approval by the University during the coming year.

V Problems

A list of problems confronting the School has been repeated in each of the past three annual reports and one regrets to say that not one has been resolved in the past four years. A listing of the problems, now four years without a solution,is as follows:

1. Space
2. Engineering Library -- a solution may he in sight.
3. More outstanding students -- i.e., the stars
4. Non-professional upgrading or autonomy in non-professional salaries
5. Secretarial service
6. Charging grants for technician and secretarial salaries

To this list of existing problems should be added a new set of problems that were evident this past year:

1. Funding. The School as well as the University managed to complete FY'70 without going too deeply in the red, but many of our activities had to be severely restricted or curtailed to meet the extremely tight budget available from the State. We simply cannot go through another poorly funded year or faculty morale as well as administrative morale will be seriously affected.

2. Categorization of State Funds. Every Engineering Department Head states that second to poor funding, the State categorization of funds and extreme difficulty to shift funds from one category to another represents a major problem. The problem was ameliorated somewhat last year because of a significant amount of trust funds made available to the Dean and passed along to the Department Heads. The trust funds gave the Heads and Dean the first flexibility in expending monies we have had at the University and a check on how these funds were spent would demonstrate the effectiveness of their expenditure. It appears that the amount of trust funds to be made available to the School will be cut by forty per cent and this represents an extremely serious blow to the School. We will lose what little flexibility we gained last year and this will be most demoralizing. The faculty of the School of Engineering is serious about achieving the goal of quality and has been extremely productive in building the sponsored research budget of the School. To reward the hard work and productivity of the faculty by reducing its trust fund support is foolhardy.

The School of Engineering will have an accreditation visit in the winter of 1972. The quality of the faculty and the curricula offered will be praised by the visiting team. We can expect to be severely criticized for our laboratories if we do not modernize and improve them before the visit. Again, the faculty has been extremely productive in attracting NSF support for purchase of undergraduate laboratory equipment. With the termination of the NSF program, more State funds will be needed for laboratory equipment.

The faculty of the School of Engineering found the events of last November and the spring extremely disruptive. Expressions of concern were also voiced about the changing of grading policies in the spring. It was recognized by many of the faculty that the national events of the year were the causes of student unrest and that handling these disruptions is a new ball game for University administrators. It is extremely easy to criticize decisions made by others and not to recognize the intensity of the protestor's feelings. Many of the engineering faculty members applaud the majority of the actions of the administration. But, most of the faculty hope that we can find ways of not polarizing and politicizing the campus this coming year. We stand ready to help in any way we can.

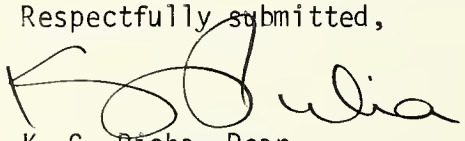
Last year the Office of Conferences was criticized. We are gratified to note that a new Program for Continuing Education has been initiated. We intend to work with Dr. Venman, the Acting Director, to insure the success of the Program. The engineering faculty has focused its efforts and energy over the past years toward building a strong research program that undergirds a strong graduate program. Public service and continuing education were not particularly emphasized because of the need to do other things first. We do recognize our responsibility for these areas and intend to put greater stress on them in the future.

VI Acknowledgments

During the period of strife and disruption on the campus this past spring, it became increasingly evident that the engineering faculty and students were trying to solve problems that were breaking around us. Though many different points of view were held, I was delighted to see how easily they could be accomodated by colleagues in the School. It is hoped that we can continue to serve as a moderating and stabilizing influence on the campus and to avoid taking extreme positions. For the fine attitude of my colleagues I am most grateful. The generous help and dedication of all of those in the School is deeply appreciated. The enthusiasm and cooperation from all to develop a School recognized throughout the Nation make the University a great and lively place to try to make one's contributions.

Special thanks again go to Mrs. Oretta Taylor and her Staff in the Office of the Dean for making the Dean's Office a happy and cheerful place to work.

Respectfully submitted,



K. G. Picha, Dean
School of Engineering

KGP:oht

APPENDIX I
APPPOPRIATION DATA

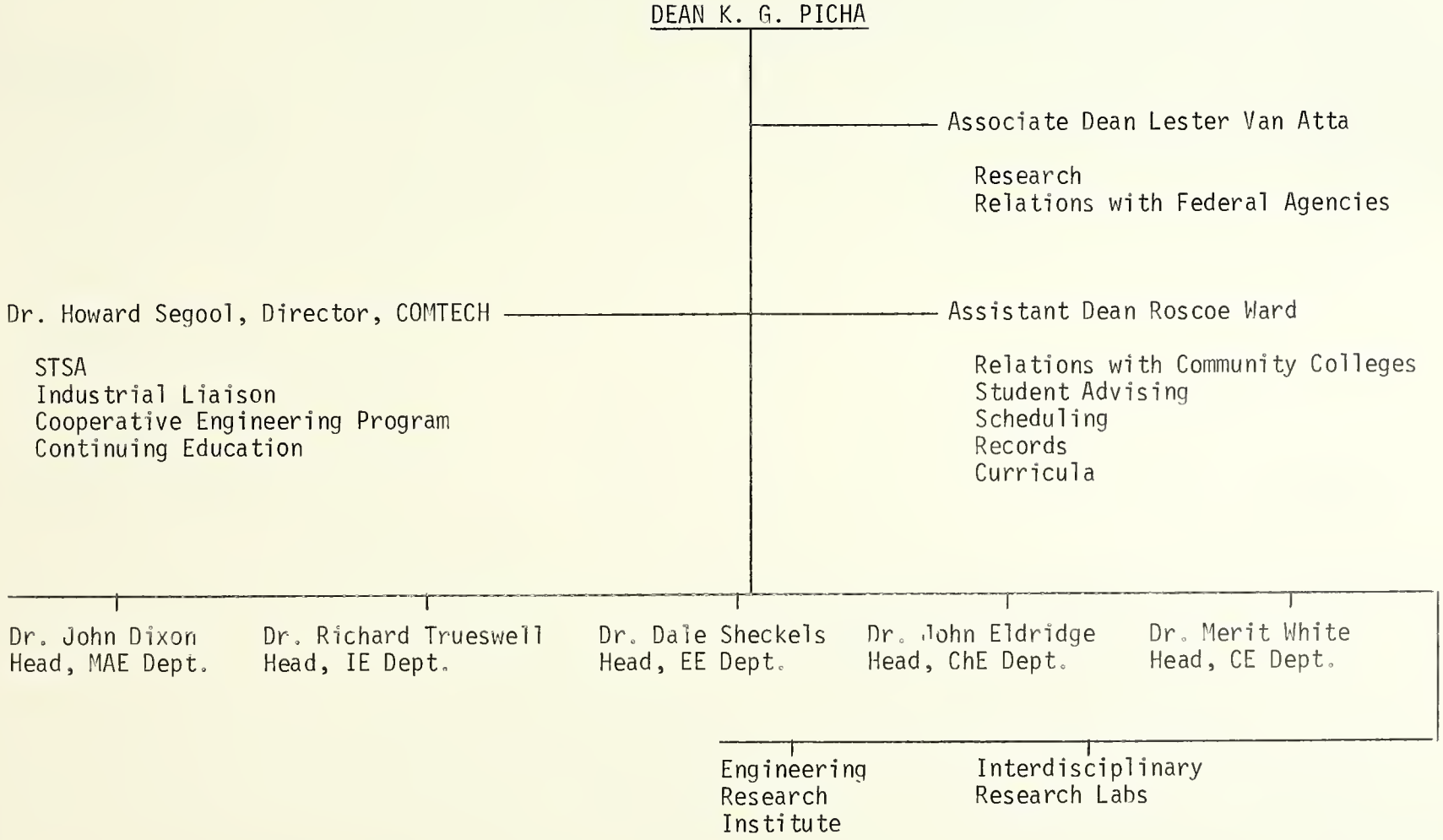
APPENDIX II

PERSONNEL & ORGANIZATION CHART

ORGANIZATION CHART

SCHOOL OF ENGINEERING

September, 1970



The following represents the breakdown by rank in each of the five Departments, excluding Deans:

	Ch. E.			C. E.			E. E.			I. E.			M.A.E.		
	67	68	69	67	68	69	67	68	69	67	68	69	67	68	69
Professors (including Heads)	3	6	7	9	10	10	3	5	7	1	2	3	6	10	8
Associate Professors	3	3	4	4	9	10	7	8	10	1	3	4	5	8	6
Assistant Professors	3	1	1	6	4	3	6	6	5	5	2	2*	9	5	8
Insturctors															1
Adjunct Associate Professors	1	1	1				1	1	1						1
Visiting Associate Professors					1	1					1				1
Visiting Professors			1									1			

*One left at the end of the first semester.

The following table lists the total personnel (full-time equivalent) in the School of Engineering as of September, 1969:

	1967	1968	1969
Deans	3	3.5	3.5
Department Heads	5	5	5
Professors	23	35	35
Associate Professors	21	33	36
Assistant Professors	31	20	17
Instructors	2	1	1
Lecturers	2	2	0
Visiting Professors	0	1	2
Visiting Associate Professors	0	2.5	1

APPENDIX III

STUDENTS SERVED

STUDENT DATA

1 STUDENTS SERVED	Fall '67	Fall '68	Fall '69
1. Engineering School Totals			
(a) (i) Number of Undergraduate Majors	960	1004	1050
(11) Number of Graduate Students	179	196	224
(b) Number of students taught	3534	4053	3850
2. Chemical Engineering			
(a) (i) Number of Undergraduate Majors	96	81	76
(ii) Number of Graduate Students	50	52	54
(b) Number of students taught	237	342	285
3. Civil Engineering			
(a) (i) Number of Undergraduate Majors	163	175	171
(ii) Number of Graduate Students	40	48	66
(b) Number of students taught	892	879	1209
4. Electrical Engineering			
(a) (i) Number of Undergraduate Majors	177	165	174
(ii) Number of Graduate Students	28	27	35
(b) Number of students taught	834	840	912
5. Industrial Engineering			
(a) (i) Number of Undergraduate Majors	57	68	73
(ii) Number of Graduate Students	29	24	30
(b) Number of students taught	159	211	372
6. Mechanical & Aerospace Engineering			
(a) (i) Number of Undergraduate Majors	189	192	222
(ii) Number of Graduate Students	32	45	39
(b) Number of students taught	916	1164	1072
7. Undesignated Engineering			
Basic and Unassigned			
(a) Number of Undergraduate Majors	278	323	328
(b) Number of students taught	486	617	*

*The Basic Engineering Department was dissolved prior to the Fall Semester 1969.

11 NUMBER OF DEGREES GRANTED

	Sept. '67 to June '68	Sept. '68 to June '69	Sept. '69 to June '70
Bachelor of Science	161	161	199
Master of Science	55	65	47
Doctor of Philosophy	3	5	7
1. Chemical Engineering			
B.S.	29	20	22
M.S.	10	5	12
Ph.D.	2	2	3
2. Civil Engineering			
B.S.	35	42	44
M.S.	16	20	8
Ph.D.	1	3	2
3. Environmental Engineering			
B.S.	0	0	0
M.S.	0	0	7
Ph.D.	0	0	0
4. Electrical Engineering			
B.S.	47	37	41
M.S.	11	16	4
Ph.D.	0	0	1
5. Industrial Engineering			
B.S.	12	15	21
M.S.	7	9	1
Ph.D.	0	0	1
6. Mechanical Engineering			
B.S.	38	40	51
M.S.	11	15	15
Ph.D.	0	0	0
7. Aerospace Engineering			
B.S.	0	7	20
M.S.	0	0	0
Ph.D.	0	0	0

APPENDIX IV

PROFESSIONAL ACTIVITIES of the FACULTY

I. Faculty Publications and Patents

(i) Office of the Dean

K. G. Picha
"Who Will Preserve the Environment?" Guest Editorial TGC Bulletin, U Mass Vol. 2, No. 2, Feb. 70.

(ii) Chemical Engineering Department

D. C. Chappelear and R. H. M. Simon
"Polymerization Reaction Engineering", Ch. I (pp. 1-24) of Advances in Chemistry Series, No. 91, "Addition and Condensation Polymerization Processes", American Chemical Society 1969.

J. M. Douglas and T. G. Dorawala
"Complex Reactions in Chemical Oscillators", Proceedings of the Joint Automatic Control Conference, Boulder, Colorado, August, 1969.

J. M. Douglas, R. E. Lumpkin and W. D. Smith, Jr.
"Importance of the Structure of the Kinetic Model for Catalytic Reactions", Ind. Eng. Chem. Fundamentals, 8, pp. 407-411, August, 1969.

J. M. Douglas and N. Y. Gaitonde
"The Use of Positive Feedback Control Systems to Improve Reactor Performance", AIChE Journal, Vol. 15, No. 6, pp. 902-910, Nov., 1969.

J. M. Douglas and A. B. Ritter
"Frequency Response of Nonlinear Systems", Ind. Eng. Chem. Fundamentals, 9, pp. 21-28, Feb., 1970.

J. M. Douglas, G. P. Baccaro and N. Y. Gaitonde
"An Experimental Study of Oscillating Reactors", AIChE Journal, 16, pp. 249-254, March, 1970.

R. S. Kirk, T. R. Blevins and R. U. Aseltine
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"Effect of Variation of Local Film Coefficients on Fin Performance", Appl. Mech. Reviews

"A Non-Equilibrium Description of Two-Phase Annular Flow", Appl. Mech. Reviews

J. O'Byrne
Internal Reports and Related Activities, George C. Marshall Space Flight Center, Huntsville, Alabama

(a) Contract final report evaluation, "Investigation of the Development of High Performance Insulation System, Lockheed.

(b) Analysis of heat flow and temperature patterns, liquid hydrogen fill line, Goodyear

(c) Pressure drop and mass flow rates, purge system, Apollo telescope mount module, Convair

(d) Effect of compression on the performance of super insulation, Lockheed, Douglas, MSFC

C. R. Poli
Reviews:
"Stability of A Canonical System with Two Degrees of Freedom in the Presence of Resonance", Journal of Applied Math and Mech. A. P. Markeev

"Present Status of Flight and Space Mechanics", Journal of the Italian Assoc. of Theor. and Applied Mech., L. Lazzarino

"The Development of Airplane Stability and Control Technology", AIAA Paper 69-1137, Perkins

"Guidance and Control 1968", Smyth AIAA Paper No. 69-72, Perkins

"On the Vibrational Motion of Interconnected Bodies", Journal of Sound and Vibration

G. E. Zinsmeister and A. L. Ong Oh

"Heat Conduction in Materials with Thermal Properties Which Are Dependent on Temperature History", Proceedings of the Sixth Southeastern Seminar on Thermal Sciences, pp. 20-32, N.C.State U., Raleigh'70

(vi) Patents

C. W. Nelson

In Preparation: Vibration and Noise Control Materials

J. O'Byrne

In Preparation: Snow Gun

F. Umholtz

Pneumatic meatpacking tool, Sept., 1969 - Licensed for manufacturing to Russell Harrington Company

Utility Knife, Jan., 1970 - Licensed for manufacturing to Hyde Mfg. Co.

In Preparation: Paint Shaker and
1 HP Reciprocating Saw

II. Faculty Papers Presented

(i) Office of the Dean

K. G. Picha

"Decision Making in the University" Engineering Deans Institute, University of Miami, May 1970.

H. D. Segool

a) Urban Seminar, SBA Center for Business and Economic Research.
b) Society of Manufacturing Engineers, Greenfield.
c) Massachusetts Rural Development Committee, Auburn.
d) Opening remarks, Institute on New Directions in Solid Wastes Processing, Framingham.

(ii) Chemical Engineering Department

J. M. Douglas
"Short course for AIChE (details given under 4 c on p. 3).

R. W. Lenz
"Several short courses (details given under 4 c on p. 3).

E. E. Lindsey
"Environmental Engineering short course, "Water Quality Control", U Mass., Mar. 23 - 25.

W. L. Short
"Chairman of ACS One-Day Symposium on "How Clean Do you Want Your Environment?", U. Mass., April, 1970.

D. C. Chappelear
"Invited seminar, "Polymerization Reaction Engineering", presented at Princeton University in Nov., 1969.

J. M. Douglas
"Paper presented at the Joint Automatic Control Conference in Boulder, Colorado, on Aug. 5, 1969.

Seminar presented to the Chemical Engineering Department at Washington University, St. Louis, Mo., on Nov. 11, 1969.

Seminar presented to the Chemical Engineering Department at Purdue University, Lafayette, Ind., on Dec. 10, 1969.

Seminar presented to the Texaco Research Dept. in Beacon, N. Y., on May 15, 1970.

R. L. Laurance
Seminar, "Polymerization Reactor Modeling", presented to Monsanto Company in Springfield, Mass., in December, 1969.

Paper on "Transport Properties in Biological Systems", presented at the AIChE - IIQPR meeting in San Juan, Puerto Rico, in May, 1970. (Also Chairman of session).

R. W. Lenz
Paper in Symposium on "New Halogen-Containing Monomers and Polymers", ACS National Meeting, New York, September, 1969.

Seminar at Research Laboratory, Shell Development Company, Emeryville, California, August, 1969.

Seminar at Research Laboratory, IBM Corporation, San Jose, California, August, 1969.

Invited Speaker, ACS Polymer Group, Houston, Texas, November, 1969.

Paper at National ACS Meeting, Houston, Texas, February, 1970 (presented by Dr. B. Wesslen).

Seminar at Research Laboratory, Dow Chemical Company, Midland, Michigan, April, 1970.

Seminar at Research Laboratory, Union Carbide Company, Bound Brook, New Jersey, May, 1970.

Seminar at Research Laboratory, Eastman Kodak Company, Rochester, New York, June, 1970.

Paper at "Second Annual Joint Symposium on Engineering for the Deep Ocean", Northampton, Massachusetts, April, 1970.

S. Middleman
"Seminar on Viscous and Viscoelastic Fluid Dynamics", presented to Monsanto Company in Springfield, Mass. in October, 1969.

Seminar on "Research in Fiber Spinning", presented to Tennessee Eastman Co. in Kingsport, Tenn. in April, 1970.

W. L. Short
Paper on "Low Pressure Ultrafiltration Systems for Wastewater Contaminant Removal", presented at the Membrane Technology Conference at Battelle Memorial Institute, Columbus, Ohio, in October, 1969.

Invited talk on air pollution, presented to Springfield Technical Community College in April, 1970.

(iii) Civil Engineering Department

D. D. Adrian and J. H. Nebiker
"Sludge Dewatering and Drying Bed Design by Simulation." presented at Second National Symposium on Sanitary Engineering Research, Development, and Design, American Society of Civil Engineers, Cornell University, July 14-16, 1969.

D. D. Adrian, F. C. Kaminsky and R. R. Rikkers
"Planning Optimal Regional Wastewater Management Systems". presented at Annual Meeting American Society of Civil Engineers, Chicago, Illinois, October 13-17, 1969.

D. D. Adrian and J. F. Ramsay
"Prediction of Benthic Deposits Dewaterability on Soil." presented at Annual Meeting Soil Science Society of America, Detroit, Michigan, November 9-14, 1969.

F. J. Dzialo
"Impact Loading of Submersible Hulls." ASCE Ocean Engineering Conference, Miami, Florida, December 1969.

R. F. Ward
Lectured in a short course presented by the N. E. Waterworks Association, October 1969.

Co-Director with J. S. Marcus of the Northern New England Junior Science and Humanities Symposium at the University of Massachusetts, April, 1970.

A. Chajes and P. S. Hsueh
"Stability of Cylindrical Panels." Sixth Congress of Applied Mechanics, Harvard University, June 1970.

L. N. Kuzminski
Presented two lectures at the Waterworks Operators School. He also presented a seminar "Efficiency of Iodine Disinfection-Comparison of Bacterial Resistance" at the University of Maine.

L. N. Kuzminski, P. C. Karalekas, Jr., T. H. Feng
"Recent Developments in the Use of Iodine for Water Disinfection." Presented by Senior author at the Annual Convention of the New England Water Works Association, Boston, Massachusetts, September 24, 1969.

W. E. Heronemus
Lectured on "Logical Design of Deep Sea Vehicles" at Florida Atlantic University. He also lectured during the University of Massachusetts - Notre Dame THEMIS Symposium held at Amherst.

T. N. Feng
"Sediment-Water Interchange of Plant Nutrients in Lakes." The Annual North Eastern Regional Anti-pollution Conference, July 23, University of Rhode Island (1969).

G. R. Higgins
Lectured at the N. E. Waterworks School, November 1969.

W. W. Boyer
"Lack of Youth Entering Public Works and State Highway Departments." Massachusetts Highway Association, June 1970.

L. A. Webster
"Transportation Planning." Landscape Architecture Series for Interdisciplinary Regional Planning RP791, November 10, 1969. University of Massachusetts.

"Highways and Traffic Control." Transportation Panel, Northern New England Junior Science and Humanities Seminar, April 3, 1970. University of Massachusetts.

L. M. Kuzimski
"Selected Aspects of disenfection - Clorine Bromine.", paper presented Chemists'Session, Fall Mtng., N. E. Water Works Assoc., Nov. 1969.

S. M. Bemben
Lectured during the University of Massachusetts - Notre Dame THEMIS Symposium.

S. M. Bemben and E. H. Kalajian
"The Vertical Holding Capacity of Marine Anchors in Sand." presented at the ASCE Ocean Engineering Conference at Miami Beach, Florida, Decmeber 1969. (accepted for ASCE Publication.)

F. A. DiGiano
"Computer Usage in Teaching." American Society for Engineering Education (Environmental Engineering/Nuclear Engineering), Ohio State University, June 24, 1970.

"The Role of Activated Carbon in Advanced Waste Treatment." University of Maine - Department of Civil Engineering, April 17, 1970.

J. M. Colonell
"The U Mass Laboratory Sea Wave Facility." Second Annual Joint Symposium on Engineering in the Deep Ocean, Northampton, Massachusetts, April, 1970.

R. R. Archer and M. L. Das
"A Comparison of Nonlinear Dynamic Beam Theories." presented at the 11th Midwestern Mechanic Conference at Iowa State University, Ames, Iowa, August 18-20, 1969. Published in Developments in Mechanics, Vol. 5, Proc. 11th Midwest Mech. Conf., Iowa State Univ., August 1969, p. 407-428.

W. A. Nash
"Vibrations of Thin Elastic Plates Subject to Random Driving Forces." presented at AGARD Symposium on Applications and Methods of Random Data Analysis, Southampton, England, July 1969.

"Random Vibrations of Plates and Shells." presented at Fifth International Conference on Non-Linear Oscillations, Kiev, USSR, August, 1969

"Response of Circular Plates to Step-Function Type Loads." presented at IUTAM Symposium on Stability of Continuous Systems, Karlsruhe, Germany, September, 1969.

"Random Vibrations of Shallow Shells." presented at Annual Meeting of International Asssociation for Shell Structures, Delft, Holland, May 1970.

M. P. White
"Prediction of Earthquake Damage to a Uniform Shear-flexible Building." Institute of Solid Mechanics, Roumanian Academy of Sciences.

(iv) Electrical Engineering

L. S. Bobrow
"Graph Theoretic q-nary Codes," presented at the 4th Annual Princeton Conference on Information Sciences and Systems, March 1970.

L. E. Franks
"N-path Filters - A Tutorial Review" presented at 1969, IEEE International Symposium on Circuit Theory, San Francisco, December 1969.

L. E. Franks
"Information as an Engineering Commodity," Lecture for Engineering 103, University of Massachusetts, March 9, 1970.

R. M. Glorioso
"V. H. F. Transceivers," February 1970, Valley Amateur Radio Club, Springfield, Massachusetts.

C. E. Hutchinson
"Design of Low Sensitivity Kalmar Filters for Hybrid Navigation," AGARD Guidance and Control Panel, 9th Meeting, Delft, Netherlands, September 1969.

C. E. Hutchinson
"Design of Kalmar Filters for Hybrid Navigation Systems," Second Annual Themis Symposium on Deep Ocean Engineering, University of Massachusetts, Amherst, Mass., April 1970.

"Themis Project," Engineering Alumni Meeting, Springfield, Massachusetts, April 1970.

"Themis Project, ASCE Student Chapter Meeting, Amherst, Massachusetts, April, 1970.

I. Lee
"Panelist Art and Computers," Seminar sponsored by Art Department and School of Education, University of Massachusetts, April 30, 1970.

R. E. McIntosh and C. E. Hutchinson
"Research in Electrical Engineering Sponsored by the DOD," University of Massachusetts, May 11, 1970.

R. E. McIntosh
"A Proposed Personnel Committee for the School of Engineering," to the School of Engineering Faculty, University of Massachusetts, March 18, 1970.

R. V. Monopoli
"Simulation and Control of Deep Submergence Vehicles, Second Annual Themis Symposium on the Deep Ocean, University of Massachusetts, April 1970.

D. Navon
"Power Transistor Stability and Reliability," May 20, 1970, Power Sources Symposium, Atlantic City, New Jersey (Invited).

D. E. Scott
"Recent Developments in Bio-Medical Engineering," March 2, 1970 Institute of Electrical and Electronic Engineers, Springfield Section.

"Transmission-line Theory and the Radio Amateur," February 13, 1970. The Valley Amateur Radio Club, Springfield, Massachusetts.

D. E. Scott and E. Dzendolet
"Power Spectral Density of Static Balance Error in Humans," March 25, 1970. Fifth Annual Meeting of the Association for the Advancement of Medical Instrumentation, Boston, Massachusetts.

I. B. Thomas
"Distinctive Features and Their Acoustic Manifestations," to Linguistics Faculty and Students, University of Massachusetts, October 3, 1969.

"Speech Perception," Bio-engineering Seminar, University of Massachusetts, October 30, 1969.

"Discrimination of Filtered-Clipped Speech by Sensori-neural Hearing Impaired Subjects," Acoust. Soc. Am. 78th Meeting, San Diego, California, November 7, 1969.

"Masking Thresholds for Sinusoidal Signals and Noise after Infinite Amplitude Clipping," Acoust. Soc. Am. 78th Meeting, San Diego, California, November 7, 1969.

"The Speech/Non-Speech Dichotomy in Auditory Perception," to Technical Staff, Bell Telephone Laboratories, Murray Hill, N. J., November 25, 1969.

" Preliminary Analysis Technique for Speech Sound Classification," National Electronics Conference, Chicago, Illinois, December 8, 1969.

"Electronic Aids for the Hearing Impaired," to ASCE Chapter, University of Massachusetts, February 18, 1970.

"Articulation Training Through Visual Speech Patterns," to Clarke School Staff and Teachers in Training, March 18, 1970.

"Pitch Discrimination Subsequent to a Variable Time Delay," Acoust. Soc. of Am. 79th Meeting, Atlantic City, New Jersey, April 21, 1970.

"Temporal Order in Speech Perception," Acoust. Soc. of Am. 79th Meeting, Atlantic City, N. J., April 22, 1970.

"Differential Diagnosis Through Pulsed Audiometry," Communication Disorders Seminar, University of Massachusetts, April 30, 1970.

(v) Mechanical and Aerospace Engineering Department

G. Boothroyd and L E. Murch
"Performance of an Orienting Device Employed in Vibratory Bowl Feeders", presented at Production Engineering Division ASME Spring Meeting, 1970.

F. R. E. Crossley
Invited Lecture before the Academy of Sciences of Romania, Center for Solid Mechanics, Bucharest, September 17, 1969.
"Engineer's Week" featured speaker: Western New England College Springfield, Mass., February 24, 1970.

Seminar - University of Houston, Texas, February 18, 1970
Seminar - University of Florida, Gainsville, Florida, February 20, 1970.
ADME Section Meeting - (Joint meeting of Western Mass. Section with Univ. of Mass. Student Branch Speaker: March 11, 1970).

R. Kirchhoff
"Election Temperature Effectsin Partially Ionized Gas Shock Waves", L. Tollot, Paper No. OB5, Presented at the American Physical Society 1969 Summer Meeting, September 1969.

J. McGowan
"A Thermodynamic Analysis of the Transpiration System of a Plant", accepted for presentation at December, 1970, Meeting of American Institute of Agricultural Engineers.

J. E. Ritter, Jr.
"Testing of High Strength Glass in Four-Point Bending", the Second Annual Joint Symposium on Engineering for the Deep Ocean, Northampton, Mass., April, 1970.

G. A. Russell
"Application of Spinning Mode Theory to Submersible Vehicle Propellers", (with W. J. Webster), paper D8, Acoust. Society of American Meeting, April, 1970.

"Propeller Wake Noise in Submersible Vehicles", Project Themis Conference, April, 1970.

III. Grants

(i) K. G. Picha and C. E. Hutchinson

Office of Naval Research Support of Research on Deep Sea Submersibles, $180,000/yr from 1967-73

J. S. Marcus and R. Ward

Northern New England Jr. Science and Humanities Symposium
U. S. Army Research Office $7,000 Spring 70.

(ii) Chemical Engineering Department

J. W. Eldridge
Themis Contract, N00014-68-A-0146-4, "New Composite Materials via Direct Polymerization on or in Catalyst-Carrying Substrates", Sept. 1, 1969 - Aug. 31, 1970, $11,853.

R. W. Lenz
Themis Contract, N00014-68-A-0146-4, "Preparation and Evaluation of New Polymers", Sept. 1, 1969 - Aug. 31, 1970, $11,293.

NSF Grant GK 16622, "Reaction-Induced Crystallization of Polymers", Jan. 15, 1970 - Jan. 15, 1972, $41,000.

E. E. Lindsey and W. L. Short
FWPCA Grant 17050 EHG, "Reverse Osmosis Treatment of Wastewaters", June 1, 1969 - May 31, 1970, $30,160, (now renewed to 5/31/71).

W. L. Short
PHS Grant 1 R01 AP 00791-02 "SO_2 and NO_x Removal from Stack Gases by CO", Feb.1, 1970 - Jan. 31, 1971, $31,246.

W. L. Short and T. H. Feng
PHS Training Grant, T 01-AP 00069-02, Air Pollution Training, Sept. 1, 1969 - Aug. 31, 1970 $52,580.

W. L. Short
ACS Small Grants Program, Distillation Program Project, $300.

M. Vanpee
Bureau of Mines complete stipend support for one graduate student, FY 70, Contract No. 14-09-0050-3090.

D. C. Chappelear and E. E. Lindsey
NSF Grant GK 1110, "Deformation and Non-Newtonian Behavior in Suspensions", $25,300.

J. M. Douglas
NSF Grant GK 4556, "Periodic Performance of Chemical Processes", Sept. 15, 1968 - Sept. 15, 1970, $57,600.

PRF Grant #3398-A6, "Approximate Solutions of Optimization Problems Using Perturbation Theory", July 1,1968 - Aug. 31, 1970, $20,640.

T. L. McAvoy
NSF Grant GK 2982, "On-Line Process Control Using an Analog Computer", June 1, 1968 - June 1, 1970, $48,900.

L. H. S. Roblee, Jr.
ONR Contract #3357(02), "A Study of Mercury Condensation", Dec. 1, 1968 - Aug. 31, 1969, $13,257.

M. Vanpee
NSF Grant GK 2801, "Flame Studies of High Energy Fuels and Oxidizers", April 15, 1968 - April 15, 1970, $59,500.

(iii) Civil Engineering Department

Grants and Research Contracts:
D. D. Adrian
Federal Water Quality Administration, 17070-DZS, "Source Control of Water Treatment Waste Solids." 1 June 1967 - December 1, 1970, $157,667.

D. D. Adrian
Office of Water Resources Research, WR-B011-Mass, "A Methodology for Planning Optimal Regional Wastewater Management Systems." 1 July 1968 - 30 June 1971, $260, 902.

A. Chajes
Dept. of Defense, THEMIS: "Nonlinear Behavior of Hull Structures." Sept. 1969 - Sept. 1970 $8,000., 4-yr contract.

A. Chajes
Column Research Council: "Stability of Cylindrical Shells," June 1969 - Sept. 1970, $1,000.

D. D. Adrian
Federal Water Quality Administration, 1-F1-WP-26, 435-01, "Dewatering and Drying Sludge on Open Air Drying Beds." 1 Sept. 1969 - 31 Aug. 1971, $13,200.

D. D. Adrian
Federal Water Quality Administration, 1-F1-WP-26, 454-01, "A Regional Approach to Storm Water Overflows," 1 Sept. 1969 - 31 Aug. 71, $14,200.

T. Feng
Federal Water Pollution Control Administration, Dept. of the Interior, Training Grant 5T1-WP-77-05, $186,016. - July 1, 1965 - June 30, 1970.

Renewal of Above grant from July 1, 1970 - June 30, 1975. $270,000.

Public Health Service, HEW, Curricula Development Grnat 5-D04-AH-00743 July 1, 1967 - June 30, 1972 $91,141.

Public Health Service, HEW, Traineeship Grant 5-A10-AH-00655, July 1, June 30, 1973, $110,500.

National Air Pollution Control Administration, Public Health Service, Air Pollution Control Training Grant 1-T01-AP-00069, Sept. 1, 1969, August 31, 1972, $150,000.

Office of Water Resources Research, Department of the Interior and the Commonwealth of Massachusetts Division of Water Resources. Research Grant 14-01-0001-1511, B005-MASS. From July 1, 1968 - June 30, 1970, $40,000.

T. Feng and F. A. DiGiano
Commonwealth of Massachusetts, Division of Water Pollution Control. Research Grant 51452, entitled "Suppression of Deposits - Water Recycling of Nutrients in Lakes." from June 1, 1970 - May 31, 1973, $129,850.

L. N. Kuzminski
Commonwealth of Massachusetts, Division of Water Pollution Control Research Grnat No. 51451, entitled "Pollution of Lakes by Watercraft Exhausts." from June 1, 1970 - May 31, 1973, $59,900.

F. A. DiGiano
Commonwealth of Massachusetts, Division of Water Pollution Control. Demonstration Plant Studies on Nutrient Removal from Wastewater by Primary Treatment." Grnat No. 51450 from June 1, 1970 - May 31, 1973, $108,550.

G. R. Higgins and J. M. Colonell
Office of Water Resources Research, "Watershed Response to Hydrological Influences." from July 1968 - June 1971. Grant No. WRB-008 $26,089.

C. E. Carver and J. M. Colonell
Department of Defense, THEMIS - Subcontract No. N00014-68 A-0146-9. "Utilization of Mobile Breakwater Devices to Reduce Surface Motions of Submersible Vehicles for Deep Ocean Engineering Purposes." 1 Sept. 1969 - 31 August 1970, $18,158.

C. E. Carver
Faculty Research Grnat No. FRG-M13-70(1), sponsored by UMass. "Aerial Survey of Pollutional Sources in Connecticut River Basin." June 1970-June 1971, $700.

S. M. Bemben
Department of Defense, THEMIS - "An Investigation for the Establishment of Design Criteria for Underwater Anchors." $10,000 (third year).

Naval Civil Engineering Laboratory, "Criteria for Design of Underwater Anchors in Clay Soils." July 1970 - July 1971, $25,000.

W. A. Nash
Air Force Office of Scientific Research, AFOSR 68-1527, "Response of Structures to Random Noise." continuing basis since 1959 at $17,000 annually.

National Science Foundation, No. GZ1759, "Development of New Courses in Ocean Engineering." from 30 March 1970 - 31 May 1971, $16,840.

National Science Foundation No. GZ1510, "Graduate Science Seminar in Earthquake Engineering." from 30 March 1970 - 31 May 1971, $20,225.

National Science Foundation, No. GK11379, "Grant for Purchase of Research Equipment." from 1 April 1969 - 31 December 1970, $27,000.

Task 16 of THEMIS project, "Structural Mechanics of Composite Materials," $15,000 for one year.

(iv) Electrical Engineering Department

C. E. Hutchinson, R. V. Monopoli, W. E. Heronemus, and F. D.Stockton
"Vehicle System Design," Department of Defense Themis Contract N00014-68-A-0146-6, extended from September 1969 to September 1970 and supplemented with $35,000. Support for four graduate students.

R. V. Monopoli
"Research in Control Systems," NASA Grant NGL 22-010-018 extended from February 1, 1970 to February 1, 1971 and supplemented with $18,700. Support for two graduate students.

R. E. McIntosh
"Optimum Pulse Transmission through Noisy Dispersive Media," Army Research Office - Durham, Grant ARO-D-31-124-70-G37, $25,544 from February 1, 1970 to January 31, 1972. Support for one graduate student and one post-doctoral associate.

I. B. Thomas
"Speech Analyzing Aids for the Deaf," National Institute of Health, NS-08306-02,$26,100 from May 1, 1970 to April 30, 1971. Support for three graduate students.

R. M. Glorioso
"Computer Systems Engineering Instructional Scientific Equipment Grant," National Science Foundation Grant GY-7788, $25,000, matching funds, July 1, 1970 to July 31, 1972.

C. E. Hutchinson and R. V. Monopoli
"Pulse Frequency Modulated Control Systems," NASA Grant NGR 22-010-018, extended from February 1969 to February 1970 and supplemented with $12,660. Support for two graduate students.

D. R. Jackson
"Parallel Pumping of Elastic Modes in Ferrimagnetic Crystals" National Science Foundation Grant GK-4945, $15,000 from 6/1/69 to January, 1971. Support for one graduate student

R. E. McIntosh and T. Tang
"The Propagation of High Energy Pulses in Ionized Media", of Scientific Research, Grant AFOSR-69-1722, $35,000 from 2/1/69 to 1/30/71. Support for two graduate students.

R. E. McIntosh
"Optimum Pulse Transmission Through Dispersive Media", NSF Grant GK-4897, $15,000 from 4/1/69 to 8/31/70. Support for two grad stu.

G. D. Sheckels, R. E. McIntosh, and I. B. Thomas
"An Information Transmission Study" NASA, Contract NAS-12-606, extended from 2/1/69 to 8/31/69 and supplemented with $23,000 Support of two graduate students

I. B. Thomas
"Speech Analyzing Aids for the Deaf" NIH, NB-08306-01, $22,725 from 5/1/69 to 4/30/70. Support for two graduate students

"Prosthetic Aids for the Deaf" grant of $4,500 from Mr. and Mrs. Howard C. Shaffer. Support for one graduate student.

F. H. Edwards
"Switching Circuits Instructional Scientific Equipment Grant" NSF Grant GY-4956, $8,900 matching funds from 7/1/68 to 5/31/70

R. E. McIntosh
"Microwave Instructional Scientific Equipment Grant" NSF Grant GY-4957, $17,000 matching funds, from 7/1/68 to 5/31/70

R. V. Monopoli
"Automatic Control Systems Instructional Scientific Equipment Grant", NSF GY-6612 $20,600 matching funds from 7/1/69 to 5/31/71

(v) Mechanical and Aerospace Engineering Department

G. Boothroyd
General Electric Grant $5,000 FY70 $15,000 total

"Oriented Devices for Vibratory Bowl Feeders", NSF Grant GK-2230. terminated August, 1970, $35,900.

NSF Undergraduate Scientific Equipment Grant GY-6207, $40,887 terminates July 31, 1971

G. Boothroyd and G. E. Zinsmeister
NSF Undergraduate Participation (GY-5825), term. 10/31/70, $7,920.

D. E. Cromack
THEMIS, Active 6/1/70, renewed September, 1969, August, 1970 $9,351

J. G. McGowan
THEMIS "Steaming of Water by Interaction with Magnetically Accelerated Colloids", $3,000 FY70, $45,000 - Terminated May 31, 1970

J. A. Fillo
NASA - "Development of a Moment Method to Solve the Three-Dimensional Boundary Layers Equations" - $9,152 (through summer, 1970).

NSF - "Boundary Layer Effects on MHD Flows" - $15,000 (through September, 1970).

C. W. Nelson
"Measurement of the Activation Volume for Interstitial Solute Diffusion in Group Metals." NSF

J. E. Ritter, Jr.
"Static and Dynamic Fatigue of Silicate Glasses," Project THEMIS
1 graduate student, terminates September, 1971.

"Development of a Two Term Sequency of Materials Courses for Mechanical Engineering Students," National Science Foundation
2 graduate students, terminates August, 1971.

G. A. Russell
"Propeller Wake Noise in Submersible Vehicles," DOD Project THEMIS Grant, $8,534. Funding for September, 1969 to August, 1970, period.

L. L. Ambs, J. G. McGowan, and G. A. Russell
Three Air Pollution Traineeships from the University HEW Air Pollution Training Grant.

G. Boothroyd and C. R. Poli
N. S. F. research grant, "Instability of the Cutting Process and Its Effect on Machine Tool Chatter," awarded May 19, 1970, $50,100 for two years.

D. E. Cromack
THEMIS (w/Prof. Heronemus, Stockton, Hutchinson, and Monopoli)
M. A. E. port-on $11,983 Sept. 70- Aug. 71.

W. P. Goss
"Aerodynamic Performance of Gravity Vacuum Tube Vehicles," NSF $15,000

R. Kirchhoff
N. S. F. Research Initiation Grant $15,000; Duration: 18 mo. Awarded Date: April 1970; TITLE: Dielectrophoretic Fluid Mechanics.

R. Mani
NSF Grant # BK 5215 (for $15,000)

NASA Grant #22-010-063 (for $15,000) "Some Real Fluid Effects in Compressor Noise."

C. R. Poli and D. E. Cromack
ARMY Research Office (3 yrs. at $72,930) "A Study of Airborne Towed Vehicle Dynamics."

G. Boothroyd and G. A. McLennan
"Interface Damping in Machine Tool Structures", $51,000 for two years

"Orienting Devices for Vibratory Bowl Feeders", $16,600 for one year, request for extension of grant GK-2230

G. Boothroyd and C. R. Poli
"Design of Parts for Automotive Feeding and Orienting", $54,500/two years

L. L. Ambs, J. G. McGowan and G. A. Russell
"Hybrid Computer Simulation of Closed Loop Rankine Cycle Dynamics", NSF - $100,000 for two years

"Study of Two Stage Automotive External Combustor" HEW, $218,000/3 years

G. A. Russell
Course Development Proposal NSF (Undergraduate Laboratory Sequence)
Amount $38,700 with Fillo, Ambs, Kirchhoff, Mani, Cromack and McGowan

J. W. Zahradnik
"Heat and Mass Transfer Studies in Food Engineering" - Hatch 218

"Oyster Propagation in Packed Towers", Town of Wareham, A. D. Makepeace Co. and the Town of Mattapoisett

" Shellfish Mariculture Demonstration Pilot Plant Project", Mass. 69107(A)

(vi) Industrial Engineering Department

R. J. Giglio, F. C. Kaminsky, R. F. Rikkers

"A Methodology for Planning Optimal Water Management Systems", total Federal funds $154,342. Approximately $100,000 for I. E. three graduate students and three faculty members were supported during past year (in cooperation with Dr. Adrian).

E. J. Rising

Preliminary Analysis of the University Health Services Out-Patient Services, approximately $4,000

IV Consulting and Other Professional Activities

(i) Dean's Office

K. G. Picha

Consultant NSF Division of Institutional Programs, made site visits on University Science Development Renewal, University of Florida

K. G. Picha (continued)

Chairman, ASEE Subcommittee on Relations with the Office of Education

ASEE Committee on Relations with Federal Government

Chairman, ASEE Curtis McGraw Research Award Committee

Massachusetts Association of Marine Sciences

Board of Higher Education Committee on Marine Science and Oceanography

National Air Pollution Control Manpower Development Advisory Committee (Appointed Chairman July 1, 1970)

ECPD, Engineering Education Accreditation Committee, Vice Chairman, Region V - Chaired Four Visiting Teams.

State Task Force, Vocational Education

Secretary and member, Commission on Education for Engineering Profession

Secretary and member, National Association of State Univ. and Land Grant College

Invited N. A. E. - Univ. Colorado Meeting on Project Build.

Advisor to EBSO Education Foundation

Director, Massachusetts Science and Technical Foundation

Director, Engineering College Administrative Council

Director, Engineering College Research Council

H. Segool

The COMTECH Director is a member of the Committee on Applications of Science and Technology of the New England Council.

Governor's Adivsory Committee on Science and Technology
Through its Director, COMTECH continued to represent the University on this Committee with primary participation in the following specific activities:

(1) Subcommittee on Economic Conversion (Vietnam De-Escalation).
(2) Subcommittee on Aims and Goals.
(3) Subcommittee to Formulate Legislation for the Mass. Sci. and Tech. Foundation. (The Foundation was officially created on August 28, 1969. Subsequent efforts helped to place Chancellor Tippo and Dean Picha on its nine-man governing board).
(4) Chairman, Program Subcommittee, joint meeting of GACSAT and the Committee on Intergovernmental Science Relations, Federal Council For Science and Technology.
(5) Invitee:
    (a) EASTERN REGIONAL CONFERENCE ON THE APPLICATIONS OF SCIENCE AND TECHNOLOGY TO PUBLIC PROGRAMS. (Arranged all invitations of University personnel to this limited attendance conference).
    (b) 40th Anniversary Convocation - Woods Hole Oceanographic Institution.

(ii) Chemical Engineering Department

J. W. Eldridge
The M. W. Kellog Co., Piscataway, N. J.

R. L. Laurence
Kenics Corp., Danvers, Mass.

R. W. Lenz
Esso Research and Engineering Co., Baytown, Texas

E. E. Lindsey
Kontro Co., Athol, Mass.

S. Middleman
Eastman Kodak Co., Rochester, N. Y.
Kenics Co., Athol, Mass.

W .L. Short
Kenics Corp., Danvers, Mass.
The M. W. Kellogg Co., Piscataway, N. J.
Resource Engineering Associates, Wilton, Conn.
Public Health Service, Dept. of Health, Education and Welfare

D. C. Chappelear
AIChE, Western Mass. Section Director

J. M. Douglas
AIChE National Program Committee Area 3e - Chemical Reaction Engineering, Chairman

Member of Organization Committee for the First International Symposium on Chemical Reaction Engineering

J. W. Eldridge
AIChE Professional Development Committee

R. W. Lenz
Chairman, Lectureship Committee of the Fiber Society
Chairman, Publications Committee, Polymer Division, ACS
Editor, Polymer Preprints and responsible for acceptance of papers and organization of the General Papers Sessions of the Polymer Division at national ACS meetings.
Member, Editorial Advisory Board, "Macromolecules"
Member, Advisory Board, "Journal of Polymer Science, Part A-1".
Alternate Councilor, Connecticut Valley Section, ACS
Member, Editorial Board, "Polymer News"
Chairman, Screening Committee for symposium papers for IUPAC Meeting, Boston, 1971.

W. L. Short
AIChE, National Program Committee, Thermodynamics
AIChE, Inorganic Chemicals
Public Health Service, Air Pollution Research Grants Advisory Committee.

(iii) Civil Engineering Department

D. D. Adrian
Member of the Technical Practice Committee and Chairman of the

D. D. Adrian (Con't)
Sludge Dewatering of the Water Pollution Control Federation. He is Secretary of the Western Branch of the Massachusetts Section, American Society of Civil Engineers.

R. F. Ward
Member, Control Group of the Research Committee, Sanitary Division, American Society of Civil Engineers.

L. N. Kuzminski
Chairman, AWWA Committee on Prevention of Industrial, Commercial and Agricultural Chemical Pollution of Water Resources.

W. A. Nash
Continues to serve as Editor in Chief of The Quarterly Journal of Non-Linear Mechanics, and as Associate Editor of Applied Mechanics Review.

W. E. Heronemus
Member of the University Search Committee for finding the Director of Marine Science. He is Papers Chairman for the Underwater Technology Division, ASME. He is also the University of Massachusetts member of the Yankee Conference R/V Trident Ship Scheduling Committee. He is Coordinator of the Ocean Engineering Program of the School of Engineering. Associate Head, Civil Engineering Department.

T. H. Feng
Member of the Standard Methods Committee and of the Research Committee of the Water Pollution Control Federation. Officer, of the Public Health Reserve.

G. R. Higgins
Member, Committee on Certification of Waterworks Personnel
Member, Committee on Rainfall and Yields of Drainage Areas of the N. E. Waterworks Association.

C. E. Carver
Chairman, Task Committee on Non-Newtonian Flow, Fluid Dynamics Committee of the Engineering Mechanics Division, American Society of Civil Engineering, Associate Head, Civil Engineering Dept.

R. R. Archer
Chairman, Session "Shell Buckling. II" at the 6th National Congress of applied Mechanics at Harvard University.

S. M. Bemben
President, Western Massachusetts Branch of the Massachusetts Section, American Society of Civil Engineers. Member of the Qualifications Committee, Massachusetts area, American Society Civil Engineers.

M. D. White
Member of a National Academy of Sciences Committee advisory to ESSA. He is member of the following American Society of Civil Engineers Committees: Task Committee on Practice-Education Liaison (Chairman), Committee on Fellowships,

M. D. White (Con't)
Scholarships, Grants and Bequests, Task Committee on Memberships. Chairman, session of an ASCE Specialty Conference on Probability at Purdue University on 14 November 1969.

(iv) Electrical Engineering Department

L. Franks
Martin-Marietta Corp., timing problems in digital data transmission; Technology Consultants, Inc., N. Y. radar signal design and data transmission problems.

R. M. Glorioso
Ovation Instruments, New Hartford, Connecticut.

C. E. Hutchinson
The Analytic Sciences Corp., Reading, Massachusetts.

D. R. Jackson
Raytheon Company, Waltham, Massachusetts, frequency selective limiters.

R. E. McIntosh
Manuscript review for Addison-Wesley Publishing Company

R. V. Monopoli
Pratt and Whitney Aircraft Corp., Hartford, Connecticut; The Analytical Sciences Corp., Reading, Massachusetts.

D. H. Navon
Computerivsion, Burlington, Massachusetts; Tyco Corporation, Waltham, Massachusetts; Luxtron, Inc., Haverhill, Massachusetts; Advisory Board of Chemical Rubber Company - "Handbook of Tables for Applied Engineering Sciences"; Bolt Berenak and Newman, Course Leader for "Advanced Digital Integrated Circuits"; Manuscript Review for Addison-Wesley Publishing Co.

D. E. Scott
Electric Game Company, West Springfield, Massachusetts.

I. B. Thomas
The Clarke School for the Deaf, Northampton, Prosthetic Aids for the Deaf; the Willie Ross School for the Deaf, Longmeadow, Prosthetic Aids for the Deaf; Scripts/Technica, Inc., Washington, D. C., Translation of Russian to Englash; Hampshire College, Amherst, Consultant on Electronic Music Studio; Holyoke Water Power, Noise Prevention.

L. E. Franks
Off-campus member of University of Rochester examining committee for Ph. D. thesis; Vice-chairman for Administration, IEEE Group on Circuit Theory; Member of IEEE Solid State Circuits Council.

R. M. Glorioso
Member of Task Force VI on Undergraduate Laboratories, COSINE (Computer Science in Electrical Engineering) Committee of National Academy of Engineering.

C. E. Hutchinson
Chairman, National Publicity Committee of Eta Kappa Nu; Local Arrangements Committee for First International Conference on Differential Game Theory.

R. E. McIntosh
Review Committee, IEEE Transactions on Antennas and Propagation.

R. V. Monopoli
Planning Committee for 1969 Annual Fall ASEE Meeting; Local Arrangements Committee for First International Conference on Differential Game Theory.

G. D. Sheckels
Chairman, Finance Committee for Town of Amherst;

I. B. Thomas
President, Franklin/Hampshire Area Mental Health Board, State Department of Mental Health; Vice-President of Hampshire County Mental Health Association; Member, Board of Directors of Massachusetts Mental Health Association.

(v) Industrial Engineering Department

R. J. Giglio

Consulting with Connecticut Valley Health Planning Council.

Several Talks and lectures in environmental problems delivered to various groups.

F. C. Kaminsky
Consultant to Lower Connecticut Valley Comprehensive Health Planning Agency-Mathematical/Computer Planning Model for Emergency Medical Transport Systems.

Community Service Member - Board of Directors - Deerfield River Valley Conservation Association - Provided engineering assistance in the study of the proposed Meadow Dam by the Army Corps of Engineers - Hydrology and statistical assistance was the primary contribution.

Chairman, Bucland-Colrain-Shelburne Mathematics Review Committee for elementary education.

K. E. Kroner
Paper presented: "Computer Mediated Instruction Programs in Engineering Graphics" at Meeting of ASEE Division of Engineering Graphics, Jan. 23, 1970, San Luis Obispo, California.

Panel Member: "The Graphics and Design Interface: at Meeting of New England Engineering Graphics Association, April 11, 1970, Hartford, Connecticut.

H. J. Miser
Consulting with the National Science Foundation; Operations Analysis, Headquarters United States Air Force; Center for Environment and Mass., Inc., of Hartford, Connecticut; Rensselaer Polytechnic Institute of Connecticut; Centers for Study, Inc., of Rockville, Maryland.

R. W. Trueswell
Nonotuck Manufacturing Company, South Hadley, Mass. Computer and Data Processing System Development.

Hampshire College, Amherst, Massachusetts. Impact of Hampshire College on the libraries of the Four Colleges.

Northwestern University Program on Research on R&D under Dr. Albert H. Rubenstein.

E. N. Corlett
Research seminars given at Texas Tech; University of Oklahoma University of Kansas, University of Michigan and University of New York at Buffalo.

F. C. Kaminsky
Advisor to the Student Chapter of the Americal Institute of Industrial Engineers.

Referree - Journal of Operations Research - Stochastic Processes.

K. E. Kroner
Advertising Manager of Journal of Engineering Design Graphics (Term expires June '72).

H. J. Miser
Seminar at Rensselaer Polytechnic Institute, Troy, New York, on "Reqrequisites to Systems Analysis of Urban Problems," December 18, 1969.

Seminars at Cornell Univ., Ithaca, N. Y. on "Urban Problems" Can Operations Research Help?" April 9, 1970.

Seminar at the University of Toronto, Toronto, Ontario, Canada, on "Urban Problems: How Can Operations Research Help?" February 11, 1970.

Invited Speaker on a panel on "Validation of OR Models," at the 37th National Meeting of the Operations Research Society of America, April 22, 1970.

R. W. Trueswell
ECPD Curriculum Inspector for Industrial Engineering. Appointed June, 1969.

National Director for Pre College Student Relations for the American Institute of Industrial Engineers.

(vi) Mechanical and Aerospace Engineering Department

L. L. Ambs, J. G. McGowan and G. A. Russell
Gave testimony on Mass. House Bill 686 concerning automibile emmision legislation.

G. Boothroyd
Have provided consulting services free of charge on behalf of COMTECH, The State Technical Services.

G. Boothroyd and A. Redford
Joint organizer and lecturer - Short Course on "Automatic Assembly" held October 1969, (41 delegates) and repeated April 1970 (12 delegates).

A. Costa
Holyoke Community College - Engineering Technology Advisory Board

F. R. E. Crossley
Director (member, Board of Directors) IAESTE/US., Inc. affiliate of the International Assn. for Exchange of Students for Technical Experience.

J. H. Dittfach
Served as Chairman of Committee for Board of Higher Education, Commonwealth of Massachusetts, to review and recommend on petition of Wentworth College of Technology for four-year Technology degree program.

J. A. Fillo
Organized (with Dr. S. N. B. Murthy) "Conference on Boundary Layer Concepts in Fluid Mechanics," Univ. of Mass., July 30-31, 1969.

G. A. Russell
Contacted and sent publications to California State Senator Nicholas Petris and Massachusetts S-ate Senator Moakley on Automobile exhause emissions.

Co-chaired a session on automobile pollution at Sierra Club "End of Earth" Conference (Earth Day, 1970).

J. W. Zahradnik
New England Marine Resources Information Program (NEMRIP) Planning Board Alternate Member from Massachusetts, University of Rhode Island. NEMRIP Extension Committee.

NEMRIP Extension Committee Member, University of Rhode Island,

New England Regional Commission Aquaculture Steering Committee Member.

Member of the Tri-Town (Marion, Mattapoisett, and Wareham) Shellfish Study Committee.

L. L. Ambs
Member of the Engineering Education Activity Committee of S.A.E.

G. Boothroyd
Member, American National Standards Institute Committee TC-3 "Cutting Tool Nomenclature." Prepared terms and definitions for Tool Setting Planes and Angles for submission to the International Standards Organization on behalf of Britian and U. S. A. delegations.

A. Costa
Treasurer, AAUP UMass. Chapter

D. E. Cromack
Chairman, AIAA Northeast Regional Student Conference Committee.

F. R. E. Crossley
Verein Deutscher Ingenieure (VDI)
First Vice-President, International Federation for Theory of Machines and Mechanisms.

President, United States Council for Theory of Machines and Mechanisms - incorporation applied for as Massachusetts non-profit, educational organization.

Member, Exec. Comm., and past Chairman, Mechanisms Conference ASME.

Member, General and Advisory Committee, Design Engineering Division, ASME.

J. G. McGowan
Western Mass. ASME Executive Committee

J. E. Ritter, Jr.
ASEE Planning committee to organize a materials workshop for the annual meeting in 1971 and local activity coordinator for ASEE.

J. W. Zahradnik
ASME - Member the Food, Drug and Beverage Committee

ASAE - Vice Chairman, Bioengineering Committee

Chairman, C-A Storage Technical Committee

Member, Food Engineering Public Relations and Inter-Society Liaison Subcommittee.

F. R. E. Crossley
Editor, The Journal of Mechanisms, a quarterly international scientific research referred journal, now in 5th year of publication. Publ. by Pergamon Press, Oxford England.

J. E. Ritter,Jr.
Editor of COMTECH Digest Materials Series (six volumes).

G. Boothroyd
Greenfield Tap and Die - Computer design of end mill flutes, one week.

Colt Industries - chip control and metrology problems, 3 days

Pergamon Press - manuscript review.

J. R. Dixon
Scott Paper Co., Philadelphia. Design decision making. Continuing.

Manuscript Reviews for McGraw-Hill, Prentice-Hall.

G. Horvay
5 days consulting with G. E. Research and Development Center on problems of Mechanics.

R. Mani
Approximately 20 days during academic year with the G. E. Research and Development Center at Schenectady, N. Y. in areas of aircraft engine noise, inlet distortion problems in axial flow fans and compressors, aeroelastic and blade vibration problems.

A. H. Redford
Colt Industries - chip control and Metrology Problems - 3 days.

G. A. Russell
Kinemotive Corp., 3 days, hydromechanical control sizing calculations.

AiResearch Mfg. of California, Summer 1969, fuel metering control development, analysis, and computer simulation.

F. Umholtz
Russell Harrington Company, Southbridge, Mass.

Hyde Manufacturing Company, Southbridge, Mass., eight hours per week, Product Development.

R. Patterson
Smith College, Northampton, Mass. 4 days. Review the design of paint frame to be used in the Center of Performing Arts Building.

R. Mani
Was asked by Prof. H. S. Ribner of the University of Toronto to act as an external examiner for a Ph. D. thesis by L. K. Schubert on "Refraction of Sound by a Jet: A Numerical Study."

Pennsylvania State University (Dept. of Aeronautical Engineering; host Prof. M. A. Sevik) on January 15, 1970.

Harvard University (Divn. of Engg. and Applied Science, host Prof. H. W. Emmons on March 18, 1970).

Both seminars were on "Some Aspects of Discrete Frequency Noise Generation in Axial Flow Fans."

G. Horvey
Seminar lecture at Stevens Institute, Hoboken, N. J., February 16, 1970, on the "Dipforming Process."

APPENDIX V

INSTITUTION	PROJECT TITLE	PROGRAM EXPENSE $
Administration		
U Mass, COMTECH	Technical Services Management *	$32,618
N. E. Center for Cont'g Educ. [1]	Office for the N. E. Technical Services Program	4,187
Field Service		
U Mass, COMTECH	Field Liaison Service *	28,984
U Mass, COMTECH	Counseling Resource Service	4,200
Mt. Wach. Com. College	Wood Products Technology Office (including seminars on Lumber Yield Improvement and on Furniture Factory Design, Layout, Equipment, Control, Management)	5,613
Information Services		
U Mass, COMTECH	Communications Service *	60,882
U Mass, I. A. I. M.	Technical Guidance Center for Industrial Environmental Control (including annual institutes on Waste Treatment and on Solid Waste Disposal) *	36,310
Referral Service		
Worc. Poly. Inst.	Massachusetts Technical Referral Center *	22,614
Educational [2]		
Boston University	Institute on Innovative Technology in the Residential Rehabilitation Industry	12,640
Boston College	New Business: Innovative Technology Management, and Capital	8,804

APPENDIX V (CON'T)

INSTITUTION	PROJECT TITLE	PROGRAM EXPENSE $	
N. E. Center for Cont'g Educ. (with Battelle Mem. Inst.) [1]	Application of Technological Forecasting to Mass. Low Cost Housing	$(4,132)	[3]
N. E. Center for Cont'g Educ. (with U. Wisc.) [1]	(Five) Demonstrations-Mobile Machinability Laboratory	618	
N. E. Center For Cont'g Educ. (with Graphic Arts Tech. Found'n) [1]	(Six) Workshops on Plate and Press, Paper and Ink, Color, Lithography, Web Offset	- -	[4]
N. E. Center For Cont'g Educ.	(Two) Seminars on Systems Analysis for Managerial Decision - Making	(1,000)	[3]
U Mass, M. A. E. Dep't.	Materials, Materials Processing, and Manufacturing	7,922	
	(Two) Short Courses on Automatic Assembly	- -	[4]
U Mass, C. E. Dep't. With the T. G. C. I. E. C.	Short Course in Water Quality Control	- -	[4]
U Mass, COMTECH with No. Shore C. C.	Industrial Forum - Product Diversification and Expansion	- -	[4]
U Mass, COMTECH with SMU and Brist. C. C.	(Two) Clinics on Improving Productivity in the Needle Trades	- -	[4]
U Mass, Dep't. of Agr. Eng.	Shellfish Mariculture Demonstration	6,637	
		232,029	
Planning Grant Funds distributed into projects		9,503	
	TOTAL	241,532	

* To be continued through June 30, 1971
1. New England Regional Program, Massachusetts pro rata share.
2. Conferences, Institutes, Demonstrations, Seminars etc.
3. Estimated but not yet expended.
4. Underwritten, but otherwise funded or self-supporting without program expense.

SERVICE PROJECT DESCRIPTIONS

Field Liaison Service

This project provides qualified engineers for personal contact, both responsive and initiative, at the client level. It identifies technical problems and opportunities, synthesizes and organizes responsive actions, locates information, expertise and direction, and generally catalyzes and assists in technological applications in business, commerce and industry.

Wood Products Technology Office

This project has functioned similarly to the Field Liaison Service but specifically in the wood products industries in north central Massachusetts and on a regular but part-time basis. It has been backed by the Wood Technology Department, University of Massachusetts.

Counseling Resource Service

This project has provided the intermittent engagement of directional and specialized information or expertise resources for vertical response to specific technology need situations on a non-consulting basis.

Communications Service

This project disseminates to subscribers selected technical information, announcements etc. through vehicles it publishes under the mastheads COMTECH TRANSFER, COMTECH DIGEST, COMTECH TIMELY TOPICS. It feeds technical digests to regularly scheduled radio programs and responsively locates information to technical inquiries.

Technical Guidance Center For Industrial Environmental Control

This project is an interdisciplinary clearinghouse and referral center specific to environmental technology. Through its subscribed TGC Bulletin it disseminates environmental information. Through its Annual Institute it educates regarding major environmental issues.

Referral Service

This project catalogs and qualifies nationwide sources of specialized information and expertise, analyzes industrial inquiries and makes selective referrals to the most promising resources. It is an essential backup for the Field Liaison Service and in its conduct is itself a field service operative.

A N N U A L R E P O R T

School of Home Economics
University of Massachusetts

July 1, 1969 - June 30, 1970.

Submitted by Helen J. Canoyer

Helen J. Canoyer, Dean

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Reports of:

The Recruitment Office

Home Economics Extension Division

Department of Home Economics Education

Department of Human Development

Department of Management & Family Economics

Department of Nutrition and Food

Department of Textiles, Clothing & Environmental Arts

I. APPROPRIATIONS - SUBSIDIARY ACCOUNT

	Actual 1967-68	Actual 1968-69	Actual 1969-70
01, Salaries - Perm. Pos.	$ 366,737.	$ 381,408.	$ 389,732.
02, Salaries - Other	27,900.	36,357.	30,867.
03, Services - Non-Empl.	14,100.	17,500.	16,000.
10, Travel	3,000.	3,000.	3,000.
12, Maint, Reps., etc.	750.	750.	829.
13, Spec. Supl. & Exps.	9,000.	9,000.	9,500.
14, Off. & Adminis.	1,200.	1,200.	1,400.
14[1], Telephone	4,000.	4,000.	3,200.
15, Equipment	2,000.	2,117.19	2,000.
16, Rentals	300.	300.	300.
Totals	$ 428,987.	$ 455,632.19	$ 456,908.

II. PERSONNEL

	Sept. 1967	Sept. 1968	Sept. 1969
a. RANK			
Professors [(including Dean & Assistant Dean)]	2	3	1
Professors "A"	4	3	5
Associate Professors	4	2	2
Associate Professors "A"	7	7	6
Assistant Professors	6	9	9
Assistant Professors "A"	1	1	1
Instructors	2	1	3
Lecturers (part time)	7	6	7
Lecturers "A" (part time)	-	1	-
Totals	33	33	34

Other Personnel - Clerical

Champlin, Grace
Choiniere, Kathleen
Greskiewicz, Mrs. Pauline
Handrich, Mrs. Phyllis
Lashway, Mrs. Gertrude
Menard, Mrs. Dorothy E.
Reall, Genevieve
Weaver, Mrs. Charlene

b. FACULTY ON LEAVE

Associate Professor Dorothy Davis - Sabbatical (2nd semester).
Dr. Marion A. Niederpruem - Sabbatical (2nd semester)
Associate Professor Helen R. Vaznaian - Leave Without Pay (10 months)

c. APPOINTMENTS, PROMOTIONS, MERIT INCREASES

Merit Increases, Feb. 1970

Dr. Mark H. Bert
Mrs. Ruth C. Boicourt
Joseph D. Burroughs
Dr. Roberta R. Collard
Dr. Verda M. Dale
Dorothy Davis
Virginia Davis
Terrence J. Dumas
Winifred I. Eastwood
Mrs. Helen E. Harvey
Sarah L. Hawes
Mrs. Rosa S. Johnston
Dr. Christine H. Hillman
Marjorie M. Merchant
Dr. Ellis G. Olim
Herbert S. Paston
Mrs. Catharine C. Porter
Mrs. Anna S. Russell
Mrs. Marjorie F. Sullivan
Dr. Barbara F. Turner
Dr. K. Padma Umapathy
Helen R. Vaznaian
Harriet J. Wright

Appointments

Mrs. Nancy S. Bender - Lecturer, part time
Mrs. Joan H. Coughlin - Lecturer, part time
Mrs. Ruth Holmes - Lecturer, part time
Mrs. Ruth Lauroesch - Inctrustor, part time
Mrs. R. A. Navon - Lecturer, part time
Charlotte Peirce - Lecturer, part time
Richard Rainsford - Lecturer, part time, changed to Instructor, part time
Mrs. Gale Stilphen - Instructor
Dr. Dorothy Travnicek - Lecturer, part time

Promotions - February 1970

Dr. Mark H. Bert - from Assistant to Associate Professor
Dr. Ellis G. Olim - from Assistant to Associate Professor
Mrs. Catharine C. Porter - From Instructor to Assistant Professor
Harriet J. Wright - from Associate Professor "A" to Professor "A"

d. RESIGNATIONS

Mrs. M. A. Appleton (part time)
*Dr. Edward K. Knapp

e. RETIREMENT

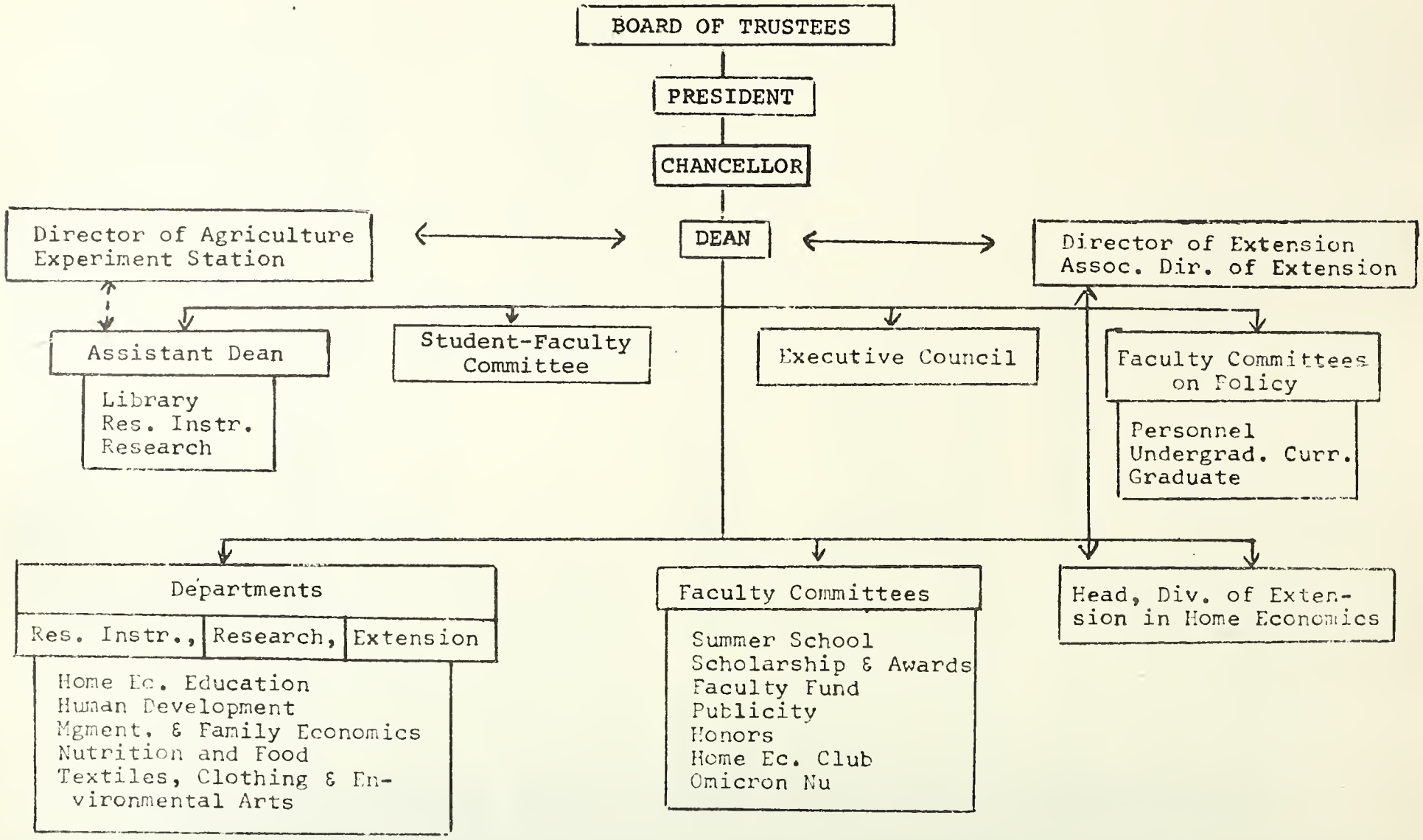
**Dr. Mary E. Lojkin

* Transferred to College of Agriculture.
** Awarded title of Professor Emeritus by U. Board of Trustees.

Announcement of Change of Appointment

SCHOOL OF HOME ECONOMICS

III. ORGANIZATION CHART



UNIVERSITY OF MASSACHUSETTS
SCHOOL OF HOME ECONOMICS

ORGANIZATION PATTERN
1969-70

DEAN'S OFFICE
Dean - Dr. Helen G. Canoyer
Assistant Dean - Dr. Christine H. Hillman
Mrs. Ruth C. Boicourt

COOPERATIVE EXTENSION DIVISION
Head - Winifred I. Eastwood
* - Faculty who are also in Cooperative Extension

HOME ECONOMICS EDUCATION
Head - Helen R. Vaznaian (On Leave, 10 months)
Acting Head - Mrs. Marjorie F. Sullivan
Mrs. Ruth Lauroesch
Mrs. Gale Stilphen

HUMAN DEVELOPMENT
Head - Dr. Ellis G. Olim
*Joseph D. Burroughs
Dr. Roberta Collard
Dr. Barbara Turner

Nursery School Teachers
Mrs. Nancy S. Bender
Terrence J. Dumas
Mrs. Helen E. Harvey
Mrs. R. Navon
Mrs. Anna S. Russell
Mrs. Ruth G. Smith

MANAGEMENT & FAMILY ECONOMICS
*Head - Dr. Verda M. Dale
*Dr. Edward K. Knapp (until 12/1/69)
*Marjorie M. Merchant

NUTRITION AND FOOD
Head - Dr. Mark H. Bert
Dorothy Davis (Sabbatic, 2nd sem.)
Dr. Mary E. Lojkin (Retired 11/30/69)
Mrs. Ruth Holmes (2nd sem.)
Mrs. Jane F. McCullough
Charlotte Peirce (2nd sem.)
Dr. Dorothy Travnicek (2nd sem.)
Dr. K. Padma Umapathy
*Harriet J. Wright

TEXTILES, CLOTHING & ENVIRONMENTAL ARTS
Head - Sarah L. Hawes
Mrs. Joan H. Coughlin
*Virginia Davis
*Mrs. Rosa S. Johnston
Dr. Marion A. Niederpruem (Sabbatic, 2nd sem.)
Herbert S. Paston
Mrs. Catharine Porter
Richard Rainsford
Mrs. Margaret Randall

SCHOOL OF HOME ECONOMICS

ENROLLMENT BY MAJORS -- SEPTEMBER 1969

CHILD DEVELOPMENT

Class of 1970	-	47
Class of 1971	-	40
Class of 1972	-	50
Class of 1973	-	17
Non-Classified	-	1
		155

DIETETICS AND INSTITUTIONAL ADMINISTRATION

Class of 1970	-	5
Class of 1971	-	8
Class of 1972	-	8
Class of 1973	-	8
Non-Classified	-	1
		30

NUTRITION AND FOODS IN BUSINESS

Class of 1970	-	4
Class of 1971	-	6
Class of 1972	-	4
Class of 1973	-	4
		18

HOME ECONOMICS EDUCATION

Class of 1970	-	27
Class of 1971	-	24
Class of 1972	-	24
Class of 1973	-	20
Non-Classified	-	2
		97

FASHION MERCHANDISING

Class of 1970	-	44
Class of 1971	-	57
Class of 1972	-	53
Class of 1973	-	51
Non-Classified	-	2
		207

ENROLLMENT BY MAJORS

Child Development	- 155
Dietetics and Institutional Administration	- 30
Nutrition and Food in Business	- 18
Home Economics Education	- 97
Fashion Merchandising	- 207
TOTAL ENROLLMENT	507

5/12/70:h

[illegible] DAY BY DAY [illegible] MULTIMEDIA 1989

[illegible]

[illegible] 1C
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] 1

1C

[illegible] ADMINISTRATION

Chief [illegible]
Deputy [illegible] 8
Chief [illegible] 8
Typist [illegible] 6
Duplicating [illegible] 4

[illegible] [illegible] [illegible]

Driver [illegible] 6
Driver [illegible] 6
[illegible] 6
Cleaner [illegible]

[illegible] [illegible] [illegible]

[illegible] 20
[illegible] 20
[illegible] 20
[illegible] 20
[illegible] 20

[illegible] [illegible]

[illegible] 20
Deputy [illegible] 20
Clerk [illegible] 20
Clerk [illegible] 20
Typist [

SCHOOL OF HOME ECONOMICS UNDERGRADUATE ENROLLMENT

FALL 1961 -- FALL 1969

Fall Semester 1961		
Freshman		- 26
Sophomore		- 34
Junior		- 26
Senior		- 30
	Total	116
Fall Semester 1962		
Freshman		- 37
Sophomore		- 32
Junior		- 40
Senior		- 28
	Total	137
Fall Semester 1963		
Freshman		- 62
Sophomore		- 44
Junior		- 35
Senior		- 36
	Total	177
Fall Semester 1964		
Freshman		- 74
Sophomore		- 63
Junior		- 40
Senior		- 33
	Total	213
Fall Semester 1965		
Freshman		- 101
Sophomore		- 94
Junior		- 53
Senior		- 36
Non-Classified		- 5
	Total	289
Fall Semester 1966		
Freshman		- 114
Sophomore		- 111
Junior		- 109
Senior		- 49
Non-Classified		- 4
	Total	387

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Fall Semester 1967

Freshman		- 134
Sophomore		- 129
Junior		- 135
Senior		- 99
Non-Classified		- 3
	Total	500

Fall Semester 1968

Freshman		- 108
Sophomore		- 165
Junior		- 140
Senior		- 128
Non-Classified		- 2
	Total	543

Fall Semester 1969

Freshman		- 99
Sophomore		- 138
Junior		- 137
Senior		- 127
Non-Classified		- 6
	Total	507

Percentage of Increase -- Fall 1961 to Fall 1968 ---------- 337.07%

5/12/70:h

V. PUBLICATIONS AND MEETINGS

Dean Helen G. Canoyer

PUBLICATIONS

None.

MEETINGS ATTENDED:

Grand Union Board Meetings - monthly.
(Also a member of the Board's Retirement Fund Committee).

N. E. Directors of Home Economics, March 12-13, 1970, N.Y.C.

Study Committee of the School of Home Economics - Chairman.
(Weekly meetings beginning on January 28, 1970).

Faculty Senate.

Spoke at University Day for Women, June 3, 1970.

PROFESSIONAL ORGANIZATIONS AND COMMITTEES

Member:

Alpha Lambda Delta
American Association of University Professors
American Economics Association
American Home Economics Association
American Marketing Association; and Western Mass. Chapter
Association of N.Y.S. Home Demonstration Agents (Honorary)
Delta Sigma Rho
Epsilon Sigma Phi (Honorary)
International Federation of Home Economics
American Association of Emeriti
Retired Public Employees Association, Inc., N.Y.S.
Omicron Nu
Phi Kappa Phi

Member of Board of Directors, Grand Union Co.

Dr. Christine H. Hillman, Assistant Dean

PUBLICATIONS, RESEARCH GRANTS, RESEARCH PROJECTS

None.

OTHER PROFESSIONAL ACTIVITIES:

1. Member of the Long Range Planning Advisory Committee of the University.
2. Member of the Committee of Assistant Deans, U. of Massachusetts.
3. Chairman, Home Economics Graduate Committee (Spring semester 1970).
4. Member of the Planning Committee for Summer 1970 two-week seminar and training program for Northeast Area School Food Service Supervisors.
5. Member, Student-Faculty Committee, School of Home Economics.
6. Attendance at the Northeast Association of Administrators of Home Economics Annual Meeting, March 12-13, 1970, N.Y.C.
7. Attendance at Annual Meeting, American Home Economics Association, June 1970.
8. Attendance at Planning Conference for Northeast Area School Food Supervisors, Washington, D.C., May 4, 1970.
9. Workshop speaker at University Day for Women, June 3, 1970.
10. Served on Ad Hoc Committees, also on Search Committees for new staff.

MAJOR ACCOMPLISHMENTS DURING FISCAL YEAR

1. Working on reorganization of records (both undergraduate and graduate).
2. Setting up a Graduate Alumnae file, arriving at addresses and location of graduates.
3. Arranging for improved rapport among faculty and students by supervising coffee hours and other informal meetings.
4. Improved methods for handling student files.

SPECIAL PROJECTS AND PROGRAMS

Same as above.

FUTURE PLANS AND NEEDS

To more efficiently carry out the work of my office, there needs to be at least one full-time typist who can be used as an assistant to both Mrs. Handrich and myself. At present, these two offices have no full-time typist.

VI. MAJOR ACCOMPLISHMENTS

The major accomplishments of the School of Home Economics as a whole are described briefly in this section. Those accomplishments of each of the five Departments are given later in this Annual Report.

1. Evaluation Study

The Faculty and students of this School, and the Dean, with the approval and urging of the President and the Chancellor, have undertaken an evaluation study of the School. The Morrill Act (1862) made possible the creation of the Land-Grant College -- which was known as "the people's college". The great need, in those days, was to focus knowledge and research very largely on technological development. Today the great need of most institutions of higher education - and specifically of land-grant colleges, of which the University of Massachusetts is one - is to focus all resources on human needs and to assist in human development. Thus the time is ripe for this School of Home Economics to examine its goals and to assess its program in terms of human needs today and in the foreseeable future.

In January 1970, a Study Committee was formed, composed of six faculty members, four undergraduates, and one graduate student, from the School of Home Economics, and three professors from allied fields at the University. All faculty and students were elected by their peers.

In addition, seven faculty from other divisions and administration in the University of Massachusetts, plus four Extension Home Economists (County) serve as "Campus Consultants". Also, four outstanding leaders from other universities, business, and government, serve as "working consultants". In order to further enlarge the input of those from outside the field of Home Economics, but in subject matter areas closely associated with Home Economics, three persons from "outside" the University serve as advisors.

The Study Committee has met weekly since January 28, 1970, and hopes to present its final report to the Chancellor next spring.

2. School Student-Faculty Committee

A Student-Faculty Committee was formed in March 1970 as an outgrowth of a series of student-faculty discussions beginning in the fall. Sixteen students were elected by their peers to serve on this important Committee. Four students (one from each class) from each of the four departments offering an undergraduate major were elected by written ballot. The sixteen students selected four faculty members and the Assistant Dean to serve as faculty members of the Committee, namely, Dr. Collard, Mrs. McCullough, Mrs. Porter, Mrs. Stilphen, and Dr. Hillman.

The Committee met weekly and presented its report to the Faculty at its last regular meeting on May 4th. The report included a comprehensive recommendation of organization and procedure to be followed by next year's Student-Faculty Committee, and a request for teacher-course evaluations in the entire School before final examinations. These evaluations could not be undertaken because the Strike interfered.

Next year should provide an opportunity to the Student-Faculty Committee to be of greater service to the School inasmuch as the organizational period is past.

Three Departments (Home Economics Education, Human Development, and Textiles, Clothing and Environmental Arts) have had active Student-Faculty Committees during this academic year.

3. School Governance

Two Departments (Nutrition and Food, and Human Development) elected to have Department Personnel Committees; two Departments (Management and Family Economics, and Textiles, Clothing and Environmental Arts) elected not to do so, and one Department (Home Economics Education) postponed the decision until fall 1970.

Four Departments voted to continue with a Department Head (Human Development, Management and Family Economics, Nutrition and Food, and Textiles, Clothing and Environmental Arts); one voted to postpone the decision until fall 1970 (Home Economics Education).

Of the School's three committees, namely, Personnel Policy, Personnel and Grievance, only members of the 1970-71 Personnel Committee were elected. The membership of the other two committees will be elected in September 1970.

4. Core Requirements Eliminated

In keeping with the aim of the Faculty and Students of this School to liberalize all programs in Home Economics, the Undergraduate Curriculum Committee (and Departments) labored for one and a half years and succeeded in bringing to the Faculty a recommendation which was adopted by that body on January 5, 1970. It was voted to eliminate the School of Home Economics core requirement.

5. Scholarship

a. For the first time in its history, the School of Home Economics published a Dean's List. The cut-off point is 3.4 or above, per semester.

b. There were six Commonwealth Scholars from the School of Home Economics this year. All six majored in the Department of Human Development.

6. Major in Human Development

The University Board of Trustees approved our request for the establishment of a major in Human Development.

* * * * *

THE RECRUITMENT OFFICE

Annual Report: July 1, 1969 - June 30, 1970

Submitted by: Ruth C. Boicourt, Liaison Recruitment Officer

STUDIES:

1. The cumulative average study for the class of 1969 was completed this year. The cumulative average predicted by the Office of Admissions was compared with that actually achieved at graduation. The fifty students for whom complete data was available achieved, with only three exceptions, an average higher than that predicted for them. Interestingly enough, all three students who achieved a slightly lower average than that predicted for them, had very high predicted averages.

2. The nine students accepted into the class of 1969 as swing-shift freshmen performed very satisfactorily, achieving cumulative averages of 1.9 to 2.7. This has been a worthwhile innovation on the part of the Admissions Office.

LETTERS:

1. Letters were sent to 282 guidance counselors in high schools providing a college preparatory program. These outlined prospective changes in the curriculum of the School of Home Economics. Requests for information were gratifying, leading to student visits and meetings with guidance counselors.

2. Letters were sent to prospective students at their request or on the suggestion of faculty or friend.

3. Letters of recommendation for jobs and graduate school were sent for presently enrolled students.

4. Letters of welcome to students accepted into the class of 1974 were sent as soon as these could be gleaned from the roster. These letters are important at a time when a student is weighing the alternate colleges to which he or she has applied. These names have to be picked out of 20,000 listed on the application roster. Though time consuming, this is well worthwhile.

SCHOLARSHIPS

The list of scholarships available to students in the School of Home Economics was revised and expanded. The thirteen awards this year were made on the basis of such varied requirements as scholarship, county residency, need and school major.

LITERATURE

Leaflets from the American Home Economics Association were ordered this year to fill in a lack of appropriate school bulletins.

Hopefully, money will become available to make possible attractive, timely, varied recruitment literature.

Perhaps the recruitment position could be expanded to at least a half-time position and filled by someone with talents for writing and preparing school brochures. Failing this, a faculty committee might be charged with this responsibility.

The "YOUR CAREER" bulletin has been useful, but it is now obsolete because of the out-of-date programs listed in it.

Literature is necessary to send to prospective students and other interested correspondents. This is also supplied to the reception desk in the Admissions Office in Whitmore Hall and to the Home Economics file in the Placement Office.

The Massachusetts Guidance Counselors Association is a helpful organization which supplies a list of Counselors and a publication which is pertinent to recruiting. A new slide series "Be Involved - Be a Home Economist" was purchased from the American Home Economics Association. It has been lent to Extension personnel, Home Economics teachers, and presently to one of our Education majors, who is using it in high schools. She is also using the filmstrip and record entitled "A New Look at Home Economics Careers", which still seems better than the newer slide series.

COUNSELING

Student advisees took advantage of opportunities for personal and academic counseling in addition to the formal program planning on the two counseling days.

SUMMER COUNSELLING:

Summer Counseling should be a real opportunity to welcome new freshmen and transfers to the School of Home Economics. The counseling should be done in Skinner Hall with some effort made to be especially hospitable. Tours of the building should be available as well as introductions to any faculty on hand. Not all students who undergo counseling end up as Home Economics freshmen. Some indication of personal interest in each one might make the difference.

COMMITTEES AND MEETINGS

The University Board of Admissions and Records meets many times during the year for policy making decisions as well as judgments on individual student petitions. Being a member of this committee is one of the most satisfying duties of the Recruitment Officer.

The Recruitment Officer is also on the School Publicity Committee and an active member of Omicron Nu.

I attended three meetings offered to graduating seniors by Mrs. Hardesty of the Placement Office. She is willing to come personally to a Home Economics seniors' meeting. This is an opportunity that should be grasped.

UNIVERSITY DAY FOR WOMEN

The Recruitment Officer was on the committee for University Day for Women and gave a talk on the vital statistics of the School. Alumnae could be a very valuable aid in recruitment if organized. We do not have a Home Economics Alumnae Association, but efforts to start one will be made at the June 3rd University Day for Women.

CONTACTS

Visits by prospective students to Skinner Hall or meetings arranged by guidance counselors at high schools keep us aware of the kind of information students want.

Some high school home economics teachers are very helpful in keeping students aware of opportunities in Home Economics. Attendance at the Fourth Annual Career Conference in Boston in January underlined the fact that a good recruiting program is expensive. Attractive, well illustrated brochures must be available. Faculty members, as well as students, must be willing to participate in recruiting endeavors. It should be a united effort by the whole school community.

FUTURE PLANS AND NEEDS

The year 1970-71 should be devoted strictly to recruiting. This would make possible more visits to high schools to talk to guidance counselors, home economics teachers and students.

Recruiting brochures and leaflets, especially an up-to-date, accurate "rainbow", are desparately needed. The one universal question of prospective students is "What kind of a program would I be taking in Home Economics?"

A current outline of the undergraduate major program in each department must be available and constantly revised.

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ANNUAL REPORT
Extension Division of Home Economics
July 1, 1969 - June 30, 1970
Submitted by Winifred Eastwood, Head

Publications, growth and professional activities of faculty doing Extension teaching are reported by the department heads of the School of Home Economics. This report will feature some background of the Division's program over the past decade, major accomplishments of the past year and future plans and needs. The impact of the program in the state is accomplished in cooperation with county Extension staff not mentioned directly in the report, although they function as key co-workers in all of the programs.

Extension Faculty

Six faculty have major responsibility for Extension teaching, one for administration and supervision; five of the seven teach one course one semester each academic year, one, Head of Management & Family Economics, teaches three courses. All carry committee responsibilities in the School and the University; two have advisees. Looking back to the late 1950's there were 12 Extension faculty in the School; eleven were full time Extension, one half time Extension, and half time research.

Changes in the 1960's

The 1960's saw a decided shrink in the support to Extension. This was at a time when individual, family and community needs to which the Division's program was focused were becoming more severe such as the need for consumer information and education, sex education, understanding of the younger generation, nutritional needs of all ages, family organization and management. Also, the 1960's brought a new audience into focus in relation to all programs supported by taxes and tied to contemporary living. The new programs were directed to the poor, disadvantaged, and the physically and mentally crippled. National leaders declared during the entire decade that the pattern of the traditional Extension Service should be adapted to the urban scene of the inner city. Yet, no new money was made available to start such a service. In Massachusetts the Division of Home Economics in its 50 year history had never made a sharp distinction between rural and city clientele, due to the composition of the state; however the primary group to benefit from the program had been the middle and lower middle class. Extension in the U.S.A. gained a new focus as did other institutions in the 1960's with the national emphasis on education, new skills and training for the less advantaged. Extension was encouraged to phase out some of the traditional programs with the middle class, and to take their "know how" to those more in need. In Massachusetts the Extension Division of Home Economics was one of the first to accept the challenge. One of the earliest studies, "The Family and Their Living Situations", to support a program with the new audience which was done in the U.S.A. was made in 1963 in South End Boston.

New programs necessarily need more attention, experimentation and follow through than do traditional programs. County staff had to be encouraged to change and middle class lay leadership had to be convinced of the need to direct a portion of the program to the less advantaged. The national emphasis on education had reached the attention of the poor, thus they and the agencies serving them were now asking for more assistance from areas of Home Economics.

In spite of the opportunities and the needs as shown by the survey made in South End the Home Economics Cooperative Extension faculty was gradually depleted with other duties such as resident teaching, school and University committee work and the withdrawing of positions when they were vacant. Also, there was a subtle eroding of the morale of the faculty by University administration by "downgrading" Extension teaching.

Resources to Expand Extension Nutrition & Food Program

In early 1969 new money was made available by Congress to each state to expand Extension's Nutrition and Food program with the rural and inner city poor. Massachusetts' share was $144,000 for six months. The money was used to hire low-income women (Program Assistants) to teach in their own communities. A second allotment came for fiscal 1970; Massachusetts received $454, 412. The second provided for an increase in county staff of seven Home Economists, three for adult work, four for 4-H. However no new faculty was added, thus drastic adjustments have been necessary. Two faculty are giving 80-90% of their time to the Nutrition & Food program, the remaining faculty 10-15% of their time. All faculty agree there is a decided challenge in the new focus and unlimited opportunity; never has an area of family need been given resources of this amount by the U.S. Department of Agriculture; it is the first time for the Federal Department to acknowledge the inner city family is Extension's responsibility. With this opportunity the Division wants to be able to meet the challenge adequately but the lack of needed faculty and the divided responsibility of the faculty makes it practically impossible.

Program Assistants Teach the Poor

In 15 months, 298 Program Assistants have been trained to work with the rural and city poor in 20 locations of Massachusetts. The drop-out is exceedingly high; 111 have left the program for a variety of reasons. Hopefully, the training will continue to benefit the individual and her family whatever she does. The indigenous worker is indeed the way to reach the community of the poor. The Division had attempted a program with welfare recipients with assistance from Public Welfare since early in the 1960's with only modest results. A Program Assistant on the job 20 hours a week teaches 33-50 different families over a year's time; some in small group meetings. Every effort is being made to have organized training for the Program Assistants in all areas of Home Economics conducted by both state faculty and county staff. Under U.S. Department of Agriculture direction a survey of results is built into the program by means of a 24 hour food recall by the homemaker, one recall when she first enrolls in the program and another six months later. Each month of the program the number of

families enrolled has increased, 1443 in February, which should increase to 3000 by May 1970.

Special Programs of the Division

Programs in the following fields have been conducted as workshops or single meetings for both lay and professionals, women and men, middle and low income.

Consumer Education - Areas of the field such as the Clothing Dollar, Credit: An American Syndrome, Buying Household Care Products, Housing Dollar, Food Market, Teenage Spending, and Economics for the Consumer.

Human Development - Sex Education, Youth in Transition, Drugs and Youth, and Family Integrity.

Personal and Family Management - Management for the Physically Handicapped, Values, Family Participation in Household Activities, and Developing Management Skills.

Nutrition, Food and Health - Nutrition--Fact and Fiction, Weight Control, Nutrition During Growth and Development, and Young Homemaker Series on Child Nutrition.

Art and Design - Interior Design, Rich Heritage (topics related to local history and tradition), Clothing and Culture.

Leadership Development - History of the Negro in America; Time, Work, and Leisure; Effective Committees.

Future Plans and Needs

1. More faculty time should be devoted to Extension--either present faculty released from resident teaching or new faculty. Areas of greatest need are Nutrition and Food, Human Development and Management and Family Economics.

   Some increased time in Extension should be given to surveys (applied research) related to program development and evaluation.

2. More publications to support Extension programs would be desirable. At present Extension faculty have neither the time or perhaps interest in the production of supportive materials. This is partly due to no credit being given them by University administrators for such publications and partly due to the extreme pressure of daily responsibilities.

3. Additional training for faculty in the behavioral sciences to assist faculty in meeting the needs of the low-income audience is desperately needed.

4. More "honor" or recognition and appreciation by the University administration should be given for Extension teaching.

DEPARTMENT OF HOME ECONOMICS EDUCATION

Annual Report, July 1, 1969 - June 30, 1970

Submitted by: Marjorie F. Sullivan,
Acting Head

Professional Activities.

Professional Meetings Attended:

1. Massachusetts Council on Family Life (Affiliated with the National Council on Family Relations), state meeting, Framingham, Massachusetts -- Marjorie Sullivan.

2. SWAP Conference. Gale Stilphen attended serving on the Academic Affairs Committee. Mrs. Stilphen was the only faculty member of the School of Home Economics to attend the conference.

3 American Association of Junior Colleges, 50th. Anniversary Convention, Honolulu, Hawaii -- Ruth Lauroesch. Mrs. Lauroesch devoted a large amount of conference time to the broad segments of the program dealing with aspects of drug abuse, an increasing problem in the secondary school.

4. Western Massachusetts AHEA, Fall Meeting. Mrs. Lauroesch attended with a selected group of departmental majors.

5. Western Massachusetts Secondary Teachers of Home Economics, monthly workshop meetings. Gale Stilphen was invited by the group to be principal speaker at the January workshop on areas of Child Development and Family Life. Mrs. Lauroesch and Mrs. Sullivan assisted in the presentation. The department was also represented at the group's February workshop by Mrs. Sullivan and at the March meeting by Mrs. Sullivan and undergraduate and graduate students in the department.

Consulting Activities:

1. Attleboro High School, Attleboro, Massachusetts and Adams Memorial High School, Adams, Massachusetts, requested consultation and assistance for their departments of Home Economics for evaluation of existing curriculums and development of new, viable programs to

more nearly meet the needs of their students. Mrs. Sullivan worked with teachers and department heads in responding to both requests.

2. Farmington, Connecticut, department of Home Economics. Mrs. Sullivan served as resource person for teacher workshop in area of Family Life and Sex Education.

The Department of Home Economics Education served as Advisor to the College Chapter of AHEA. Professional Activities of this group for the year follow:

1. Presented program: "Education for Family Life -- Can it be Done?" Speaker, Dr. Eleanore Braun Luckey, Professor and Head, Department Child Development Family Relations, University of Connecticut. Open to School of Home Economics and guests, other interested departments on campus.

2. Sponsored initial showing in the area of new, outstanding Swedish film, The Child. Open to University community.

3. At their invitation, the department served as hosts for the annual spring meeting of the Western Massachusetts Home Economics Association on the campus and produced and presented the program -- "The Alive and Growing Teacher --Meeting the Real Needs of Today's Youth."

4. In response to current efforts to increase awareness of environmental problems, the college chapter sponsored a program with Mr. Bernard Berger, Director of Water Resources Research Center as speaker. His topic, "Environmental Quality Control - The Responsibility of the Individual".

5. Advisor and officers for the year attended the annual Spring Meeting of the State Home Economics Association at Sturbridge, Massachusetts.

6. Two additional activities, less professional in nature, included a social event and a fund raising activity.

MAJOR ACCOMPLISHMENTS

In the absence of the depatment head who is on leave for this year, the department has functioned with an acting head, one

full-time instructor and one instructor one-half time, both of whom were hired for the year. These two people have given untiring effort and willing cooperation in maintaining the ongoing work of the department and in venturing onto new paths. Their contribution has been significant.

Major Accomplishments have been as follows:

1. The design and adoption of a new and more adaptable undergraduate major program, providing for two alternative ways of meeting certain University requirements. These additional options provide needed flexibility for satisfying the multi-faceted interests of today's committed students, thus fulfilling a request they have repeatedly made.

2. The development and implementation of flexible time-modified requirements in the teaching internship program, making possible earlier and more diversified experiences in the secondary school. Current evaluation decisively indicates the desirability of continuing this program, subject to further modification as student needs and interests are revealed through reality-testing. One student teacher summed up her feelings thus --

   "Rewarding, frustrating, maddening, challenging, joyful, exhausting, exhilarating, and unequaled as an adventure of adventures..."

3. Institutes for Cooperating Teachers have been a long recognized need. To raise the quality level of the internship experience for departmental majors it has become imperative that we involve the secondary school cooperating teacher more fully in our total educational program. To this end, a series of full-day institutes was initiated and carried through. Cooperative analysis of results at this time indicate that much progress was made, and some direction for continuation and expansion of this program was determined.

4. Continuation of cooperation with the School of Education. Continued planning with the School of Education has resulted in development of the cooperative MAT program. Implementation was accomplished this year and we have at present two full-time graduate students in the program.

5. School Study.
   While the Department of Home Economics Education is not represented by faculty membership on the Study Committee, it has cooperated in all ways requested by

the committee. The choice of student representation is a fortunate one. It is expected as a direct result of this study that new and imaginative and vastly more functional direction for this department will evolve.

SPECIAL PROJECTS AND PROGRAMS

1. Black Studies Program Proposal to CEEBS Program.
   A program for Black Studies, Home Economics as Applied to Problems in the Black Culture, was presented to the CEEBS Department for consideration and possible setting up of a seminar designed to examine more closely direct application of Home Economics and development of a program for Black Students. This proposal was made by Mrs. Stilphen.

2. Student Counselors.
   Increasing numbers of counseling problems inherent in a new, more flexible program place heavy responsibility on faculty members counseling 48 or more students. To more adequately counsel these students (and to extend the benefit of immediate recent experience), the department is currently "counseling" juniors and seniors to assist with the counseling of freshmen and sophomores prior to pre-registration this spring.

FUTURE PLANS AND NEEDS

Major needs of the department exist in areas of faculty, space, physical resources, and non-professional personnel. The rapidly changing needs of a changing society require unprecedented changes in education at every level. The need is crucial to venture afield, to design more imaginative programs directed to the concious seeking out of solutions to these problems.

Priorities are seen in this order:

1. The need for additional personnel for this department is immediate and crucial. We desperately need research oriented persons in Home Economics Education to direct graduate student research and to initiate and direct research in urban and non-urban school settings at every level. Two positions are needed here.

   At least one additional faculty person is needed to teach additional sections of courses necessitated by growing enrollments and to permit the continuation and enlargement of the student internship program both semesters on an expanded geographical basis. Additions

to this department must be persons of vision, ability, and flexibility, able to anticipate the broader concerns of today's committed college student, enabling him to satisfy specific or multi-faceted professional interests in ways that will be individual, relevant, and creative for him. Such persons must come to grips with reality, be able to cut across lines of race, social class, and sex in fulfilling their unique function as teacher, to help facilitate the emergence of individuals who are physically, emotionally, and intellectually effective -- who can then, it is hoped, repeat the cycle.

2. Immediate need exists for the development and expansion of the graduate program, both for full-time degree oriented students and for in-service teachers of home economics within the state. Our obligation to this latter group has been ill-defined. From it we must draw those cooperating teachers responsible for the supervision and guidance of our teaching interns in the secondary schools. They both want and need continuous in-service education and assistance. A relatively small number currently hold the master's degree. The marital status and family responsibilities of many of these women precludes extended, in-residence, formal course work. Flexible, individually designed means to meet their educational needs must be found. This is not entirely altruistic on our part, since it is a most important means by which we can hope to raise the <u>quality level</u> of our teaching internship program. A beginning was made this year in the form of a series of full-day institutes for cooperating teachers. Much, much more needs to be done.

3. Research needs of this department are great but at present are virtually non-existant. Both funds and additional qualified faculty are prerequisite to development of essential research.

4. New programs at the undergraduate level must include the design of a wide variety of internship experiences. Need for such programs in addition to existing offerings is unquestioned. This would permit greater flexibility outside of, but directly related to, the student's own area of concentration.

5. A full-time secretary is needed by the department. Our present part-time (one third) secretary does a noble job in attempting to meet our requests, but without more time available, many necessary and desirable projects and work are not possible.

6. Current space assignment (one small, totally inadequate room in Hampshire House), places a sever handicap on the present functioning and immediate future development of this department. The diverse needs of undergraduate, graduate and in-service groups cannot be met under existing conditions. Current numbers of departmental majors with accompanying diversity of needs result in competition for space and equipment. Crowded conditions necessitate inefficient and non-flexible use of existing equipment and facilities, and provide no space for pre-view and use of those instructional materials essential to the educational endeavor. Additional space at least equal to existing area is a minimum, immediate essential.

7. Current laboratory needs of this department are closely related to space needs. Provision for a comprehensive resource center for pre-service and in-service teachers, where instructional materials could be used, shared, evaluated, and suitably housed to facilitate such use is seen as a long-time need. The unavailability of a great variety of such resources to many in-service teachers seriously impedes the quality level of curriculum revision. The University has both great opportunity and obligation to exert leadership in this state in this area. It can be done, the need is severe, help presently given is on a too-limited basis. Both funds and additional space are needed!

MFS:ls:5/19/70:31

DEPARTMENT OF HUMAN DEVELOPMENT

ANNUAL REPORT: JULY 1, 1969 - JUNE 30, 1970

Submitted by: Dr. Ellis G. Olim

FACULTY PUBLICATIONS, RESEARCH GRANTS, RESEARCH PROJECTS, AND OTHER PROFESSIONAL ACTIVITIES

Publications

The following articles have been published (or are in press) since the last report:

Collard, R. R. Review: McDougall, Joyce & Lebovici, Serge. Dialogue with Sammy. A Psychoanalytical contribution to the understanding of child psychosis. Child Development Abstracts and Bibliography, in press.

Olim, E. G. Maternal language styles and cognitive development of children. In F. Williams (Ed.), Language and Poverty: perspectives on a theme. Chicago: Markham Publishing Co., 1970.

Olim, E. G. Maternal language styles and children's cognitive behavior. The Journal of Special Education, 1970.

Olim, E. G. Relationship between linguistic competence and cognitive competence. Bulletin No. 24, Research Relating to Children, U.S. Department of Health, Education and Welfare, 1970.

Papers

Turner, B. F. and Tobin, S. The relationship of personality variables to stress reaction. Presented at the 8th International Congress of Gerontology, Washington, D. C., August, 1970.

Turner, B. F. Youth groups as agents of social change. In-service Extension Training Conference, U. Mass., Amherst, December 4, 1969.

Collard, R.R. Children in Russia and Israel. In-service Extension Training Conference, U. Mass., Amherst, Dec. 4, 1969.

Olim, E. G. Changing conceptions in Human Development. In-service Extension Training Conference, U. Mass., Amherst, Dec. 4, 1969.

Publications in Progress

Turner, B. F., Tobin, S., and Lieberman, M. Psychological predictors of adaptation to changes in life space: the stress of institutionalization. To be published in the Journal of Gerontology.

Turner, B. F., Kahn, R. L. Age as a political issue. To be published in the Journal of Gerontology.

Turner, B. F. Chapter in M. A. Lieberman's book on institutionalization.

Olim, E. G. Language and cognitive development. Book in progress, to be published by Scott-Foresman.

Collard, R. R. Review of Bayley Scales of Infant Development for Buros' Seventh Mental Measurements Yearbook.

Collard, R. R. Exploratory behavior in infants from varies social backgrounds. Submitted to Journal of Genetic Psychology.

Collard, R. R. Satiation and spontaneous alternation in human infants. Submitted to Journal of Experimental Child Psychology.

Collard, R. R. Exploration and play in human infants. To be submitted to The Merrill-Palmer Quarterly.

Collard, R. R. Review of The preschool attainment record and The preschool inventory for the 7th Mental Measurement Yearbook, 1971.

Burroughs, J. D. In cooperation with Philip Rice, University of Maine, and Paul Nuttall, University of Connecticut, a publication relating to Cooperative Extension programs in Sex Education in New England is being prepared. These are expected to be published as a series of Extension Bulletins.

Research Grants and Research Projects

Dr. Turner received a faculty research grant for a study titled "Perception of opportunity structure and socialization for achievement as related to sex, race, and social class." This two-phase study, which is a study of University freshmen, is now in the second (interview) phase. Data analyses are expected to be compiled during the summer of 1970.

Dr. Olim received a faculty research grant for a study titled "Relationship between linguistic and cognitive competence." Under this grant, Dr. Olim and his project staff have been developing measures of linguistic competence of preschool children. These measures are based on transformational generative grammatical theory, which sets forth a theory of grammar and a set of generation rules that relate the sound system of a language to its meaning (semantic) system by way of syntactic rules. Because transformational grammar deals with the implicit, underlying structure of language (which carries the meaning) rather than the surface structure (typical of traditional grammars), it is hypothesized that the measures developed will prove more reliable indicators of children's cognitive competence than language measures based on surface structure grammar.

The work is preliminary to a project for which outside funding is being sought.

The following research projects of graduate students, under faculty direction, are now under way:

Modification of aggressive behaviors in preschool boys. (Dr. Collard, Director.) The direct aggressive behaviors of pairs of three- to four-year-old boys in a play situation will be either interfered with or ignored to see whether teacher intervention or non-attending leads to a greater decrease in expression of direct aggression and to an increase in indirect aggression.

Methods of handling aggression in five-year-old children used by Chinese and American mothers. (Dr. Collard, Director.) Mothers in Taiwan and in the United States will keep records of the aggressive behavior of their five-year-old children. The mothers' attitudes toward, and methods of handling, aggression in their children will be compared cross-culturally.

A study of the child's conception of continuous quantity. (Dr. Olim, Director.) The study is in part a replication and in part a modification of Jean Piaget's classic conservation of continuous quantity experiments, using a sample of 20 four-year-olds, 20 five-year-olds, and 20 six-year-olds. The study is an attempt to clarify some of the concepts children have of a liquid quantity and the reasons they give for having these concepts, leading to a greater understanding of how the concept of conservation develops within the child.

A comparison of explicit and implicit concept attainment in preschool children. (Dr. Olim, Director.) This study has three objectives: (1) to develop an objective concept attainment task (one not requiring the child's verbalization in order to score responses); (2) to compare this objective concept attainment task with the Conceptual Sorting Task developed by Irving Sigel; and (3) to compare the performance on both tasks of children drawn from two socioeconomic status levels: middle and lower.

Research Grants In Preparation

Proposal by Dr. Turner to HEW titled, "A typology of personality characteristics consistent with positive adaptation in institutions for the aged."

Faculty research grant by Dr. Collard for a study titled, "Impulsivity and verbal ability in four-year-old boys."

Research Projects Being Developed

Collard, R. R. Generalization of habituation in human infants.

Turner, B. F., and Guttmann, M. A. A continuation of the career socialization study with Mt. Holyoke students. Planned for the fall of 1970.

Turner, B. F., and Appley, D. Plans for a number of studies dealing with aspects of male-female relationships among students moving into newly created sex-integrated sormitories.

Other Professional Activities

a. Workshops and Cooperative Extension

Professor Burroughs conducted a seminar series in 8 counties, "Youth in Transition," and a seminar series in 5 counties, "Sex Education."

He conducted a Human Development Workshop for Hawaii Cooperative Extension staff at the University of Hawaii, Honolulu; and a workshop for Vermont Cooperative Extension Aides. He also participated in planning a training conference in Human Development and Family Relationships for Massachusetts County Extension Home Economists and 4-H Club Agents, at Amherst, December 3-5, 1969, and a training conference for Cooperative Extension Nutrition Program Assistants. Professor Burroughs and Dr. Olim conducted sessions at the nutrition conference.

Mr. Dumas conducted two workshops: a workshop in Leadership Training for the 1969 Summer Headstart Leadership Training Program, Hanpshire County; and three sessions in the School of Education on Curriculum Development for Educators of Young Children. He also spoke on Child Development to the Home Economics Class of the Amherst Regional High School.

b. Other

Professor Burroughs has been serving as Chairman, Massachusetts Council on Family Life, and Chairman, University Tenure and Grievance Committee. He is also a member of the Board of Editors of The Family Coordinator, in which capacity he reviewed and evaluated 56 manuscripts during the report period.

Mr. Dumas is a member of the National Association for the Education of Young Children Task Force for the Education of Young Children; president, Western Massachusetts Association for the Education of Young Children; Secretary-Treasurer, New England A.E.Y.C.; and Vice President, Massachusetts Association for Childhood Education. He spoke at the Midwestern Association for the Education of Young Children, in Detroit.

Dr. Collard is advisor to the South City Tutorial Center in Holyoke, Massachusetts, and has been asked to become a member of the board. Dr. Collard attended the following professional meetings: New England Society for Research in Child Development, Boston; New England Psychological Association, Boston; American Association for the Advancement of Science, Boston; Play and Playgrounds: a Symposium, University of Massachusetts, Amherst; seminars on Urban and Regional Development, U. Mass.; and Conference of the New England Association for the Education of Young Children, New Haven.

Dr. Turner attended the 8th International Congress of Gerontology meeting, Washington, D. C. and the annual meeting of the American Psychological Association.

Dr. Olim attended the annual meeting to the American Psychological Association, the New England Psychological Association, and the Association for Humanistic Psychology.

MAJOR ACCOMPLISHMENTS OF THE DEPARTMENT DURING FISCAL YEAR 1969-70

Table 1 sets forth the undergraduate enrollment in HD courses for Fall 1969 and Spring 1970. The enrollment of 393 for Fall 1969 is up 158 from the Fall 1968 enrollment of 225. The Spring 1970 enrollment of 468 is up 193 from the Spring 1969 enrollment of 270. To some extent, the increase in enrollment reflects increased enrollment in the University, but it may be noted that the percentage increases are far greater thn the percentage increases in the University's student body. Some of the increased enrollment may reflect a redistribution of areas of interest within the University. Some of the increase undoubtedly reflects the growing interest of persons in child development and early childhood education.

The latter may be adduced from Table 2, which sets forth the growth in the Child and Human Development undergraduate majors in the past year. From September 1968 to October 1969 there was an increase in majors of 21; from May 1969 to May 1970, an increase of 64. Since seniors cannot change their major and since juniors do so only with difficulty, the figures for sophomores and freshmen are instructive. From October 1969 to March 1970, the number of freshmen majors increased from 19 to 59 and the number of sophomores, from 50 to 71. The Department now has the largest number of majors in the School of Home Economics.

During the year, also, the Senate and the Board of Trustees approved a second major, Human Development, in addition to the existing major in Child Development, and several students are majoring in the new major. The second major was designed to cover the entire life span. The Senate also approved a new course, HD 370/670, Human Development in Adulthood.

We are attracting more students who go on to graduate school. One of our seniors has been accepted by every graduate school of social work to which she applied and has accepted the offer of Smith College. Another senior has already been accepted by Columbia, another by George Washington University, another by Merrill-Palmer Institute of Human Development.

The grade point average of majors in Child Development have risen dramatically. Since they take most of their course work in the College of Arts and Sciences, this is evidence that our students compare favorably with Arts and Sciences students in their scholastic ability and performance. This is a reflection of the improved quality of students we are receiving in the University and of the improved attractiveness of the Child and Human Development majors. Because of the improvement in quality of students, the Department of Human Development now has six Commonwealth Scholars participating in the Honors Program.

The Department is grateful for the support it has received during the past year. As a result, the Department has been able to recruit one additional Assistant Professor, who will take over the duties of directing the Laboratory School, teach, and engage in research. The Department also added two new part-time Head Teachers this year in the Laboratory School.

This year saw the start of a class for mentally retarded youngsters in the Laboratory School. All costs, except the provision of space, heat, and light, are borne by the Regional Mental Retardation Office of Western Massachusetts under a written agreement. The school now has 8 retarded children. It is being used as a facility for Child Development majors who are interested in working with the mentally retarded.

Table 1. Undergraduate Class Enrollment

Course	Fall 1969	Spring 1970
HD 270	135	175
HD 310	--	33
HD 350	45[a]	21[a]
HD 381	49	49
HD 383	44	49
HD 382	22	34
HD 384	6	14
HD 360	41	--
HD 380	--	58
HD 390, Senior Seminar	27	--
HD 391, Senior Seminar	--	23
HD 386, Special Problem	12	--
HD 387, Special Problem	12	--
HD 388, Special Problem	--	5
HD 389, Special Problem	--	7
	393	468

[a]In the first semester, HD 350 was the laboratory part of HD 270, which accounts for its higher enrollment. In the second semester, HD 350 was offered as a separate course.

Table 2. Undergraduate Majors in Child and Human Development

	Sept 1968	May 1969	Oct 1969	May 1970
All classes	134	150	155	214
Freshmen	14	37	19	59
Class of 1972	14	37	50	71
Class of 1971	32	34	40	47
Class of 1970	54	47*	46	37*

*The decline from the Fall to the Spring was due primarily to midyear graduations and secondarily to a small number of University drop-outs.

SPECIAL PROJECTS

Dr. Olim is a member of the Main Study Committee of the School of Home Economics. This past year, Dr. Olim has also been serving on the following committees of the Committee on Environmental Quality: Steering Committee, Sub-Committee on Major Goals, and Sub-Committee on Research, and Sub-Committee on Education.

Finally, a survey of all Child Development majors was undertaken to ascertain the attitudes and opinions of majors with respect to educational policy and practice. Results are now being tabulated and will become the subject of a report. The results will be used to guide the Department in its future directions and plans.

FUTURE PLANS AND NEEDS

As stated in last year's report, the development of a Ph.D. program is an urgent need, which has not progressed as rapidly as it should, for lack of available staff to concentrate on its development. With the addition of another faculty member (bringing to four the number on the graduate faculty), we expect to be able to give a high priority next year to the development of a Ph.D. program. The addition of another person to the faculty will also permit us to assign the responsibility to one person to build the graduate program in the Department. Though the number of graduate students in the Department is the highest ever, it is still lamentably low because we have been caught in the vicious circle of not having enough faculty to meet the undergraduate program needs and at the same time devote the necessary energy to building up the graduate program. In turn, the lack of a sufficiency of graduate students to provide us with teaching assistants has prevented us from expanding undergraduate class enrollment as high as it should be to meet the growing demand, and as high as it could have been and could be if we did not have to close classes for lack of adequate resources. Additionally, the lack of graduate research assistants has tended to hold back the amount of research the faculty can engage in.

The Department stands ready to engage in, and believe it can make a significant contribution to, the social psychological and human development aspects of the study of man and his environment. We also know that if the "home economics" label is removed from the name of the School of Home Economics, male student interest in the Human and Child Development programs would expand considerably. With proper backing, we are confident that we could rapidly expand the number of majors and we could recruit additional faculty of excellence. With proper support, then, Human Development would become one of the surest growth stocks on the educational exchange.

During the past year, we placed the Laboratory School and the training of early childhood educators on the soundest base yet. We have also

opened up new career options for child-serving professions other than teaching. During the coming year we plan not only to continue these programs but to make the Laboratory School and excellent research training facility as well. The Department is woefully in need of space for research, and we hope that this lack will be remedied in the coming year.

The presence in our midst of six Commonwealth Scholars presents us with the exciting challenge of providing greater opportunities and incentives for promoting high scholarship and for encouraging independent study among our students. Neither the Commonwealth Scholars nor we are interested in creating an "elite." We hope, however, that this society of young scholars will serve as a catalyst for bringing sound educational innovations into the Department and the School.

Finally, next year we are redistributing our advisees so that students living in the same general vicinity will report to the same advisor, who will be assisted by several seniors acting as "senior advisors." Under this plan, we hope to create a greater sense of "community" among the students and also to give uder-class students the benefit of the experiences of the senior advisors.

ANNUAL REPORT
Department of Management and Family Economics
School of Home Economics
July 1, 1969-June 30, 1970
Submitted by Verda M. Dale, Head

Faculty publications, research grants, research projects, and other professional activities:

Faculty Publications:

Dale, Verda M. and Susan J. Uhlinger. "Resources in Home Economics for the Blind Homemaker," Massachusetts Home Economics Association. 1969, 23 pp.

Merchant, Marjorie M. The Price of Poverty in the Marketplace, Cooperative Extension Service, University of Massachusetts, Amherst. 28 pp.

Knapp, Edward K. Heterogeneity of the Micro-Neighborhood As It Relates to Social Interaction. Publication No. 38, Cooperative Extension Service, University of Massachusetts, 1969, 55 pp.

Research Grants

The Department has no faculty with research assignments. However, Marjorie M. Merchant, as a part of her Cooperative Extension assignment, completed a research project funded with $24,000 under Title I of the Higher Education Act. The research involved investigating marketing practices and policies in low-income areas, and the results have been published.

Research Projects

By request from citizens in Worcester County, a study of the Worcester market conditions, as related to food purchases, is in progress. The study is a modification of the Title I investigation mentioned above. This, too, is a part of Cooperative Extension activity.

Professional Activities

Verda M. Dale:
- Member of Resolutions Committee of American Home Economics Association
- Speaker at annual conference of American Association of Workers with the Blind, South Athol, Massachusetts, Sept. 18, 1969.
- Attended conference: "The Family--The Focus on Management," Pennsylvania State University, June 30, July 1, 1969.
- Member, Faculty Senate Academic Matters Committee
- Chairman, Faculty Senate Faculty Affairs Committee
- Member, University International Programs Advisory Committee
- Member, College of Agriculture Center for International Agricultural Studies Curriculum Committee

Professional Activities Cont.

Member, School of Home Economics Executive Council
Member, School of Home Economics Undergraduate Curriculum Committee
Member, School of Home Economics Graduate Committee
Chairman, Ad Hoc Search Committee for new faculty member
Member, Ad Hoc Committee for Personnel Evaluation
Member, School of Home Economics Study Committee

Marjorie M. Merchant: Chairman, Consumer Interests Committee of American Home Economics Association. Was responsible for a national survey of AHEA members on implications of the Metric System for the field of Home Economics should the U.S.A. adopt a universal metric program; Chairman of program on Metric System for annual meeting of AHEA in Cleveland, June 1970; conducted meeting on Consumer Interests of AHEA in Washington, D.C., October, 1969.

Participant of AHEA's Workshop on Para-professionals, University of Nebraska, October, 1969.

Panelist on White House Conference on Nutrition, Food and Health--Social Action Task Force--Consumer Force, December 1969.

Member of Research Award Committee, American Council on Consumer Interests.

Member of Food Committee of Consumer Federation of America

Member of International Organization of Consumers Unions--Food Standards Sub-committee

Member, Faculty Senate Continuing Education Committee
Member, School of Home Economics Personnel Committee
Faculty Advisor, Omicron Nu
Member, Ad hoc Seorch Committee for new faculty member

II. Major accomplishments during the fiscal year 1969-70

The major accomplishment during the year has been to survive. With only two members in the department, both having dual responsibility for resident teaching and Cooperative Extension program development, and heavy school and University committee assignments, only mere maintenance of a management and consumer economics program has been possible. Of the courses that were taught during this year--the enrollment was as follows:

Fall 1969		Spring 1970	
MFE 250	97	MFE 250	103
MFE 550	1	MFE 550	1
		MFE 274	69
		MFE 377	16
Contact hours:	294	Contact hours:	583

Total Contact hours: 877

This teaching load was carried by two persons, both of whom having diversified assignments, and whose teaching assignments add up to the equivalency of less than one full-time instructor. Obviously, more faculty are needed. Unless more help is available, it is impossible to place a growth emphasis on the program, or even maintain it adequately.

The Cooperative Extension program in the home management-consumer economics-family economics areas in the past has been a strong core of the Extension Division of Home Economics. Two years ago there were four faculty members doing Cooperative Extension work, two of them full-time. With the retirement of one faculty member, the position vacancy was transferred elsewhere. The other position has been filled for next year. As can be expected, the Cooperative Extension program has suffered, particularly in the home management and family economics areas. The program in consumer economics has been sustained at a stronger level, but there is a great need for more work in this particular subject matter field.

II. Special Projects or Programs

Special training was given by the Department to the program assistants hired by Cooperative Extension to promote nutrition education to low-income persons. The training included work in food buying practices and principles and in organization for improved home management.

Extension programs relating to consumer problems of low-income families were developed in Bristol and Worcester counties. These programs came as a result of the impact of the White House Conference on Nutrition, Food and Health, and the impetus given by a series of consumer education institutes held last year for professional workers in the poverty programs on a community level. The institutes were an integral part of the work carried on under the Title I funding.

Special training for working with blind adults and youth was given to Extension county workers. The Massachusetts Association for the Blind cooperated in the training. This training was a part of a continuing effort to assist the county home economists in meeting the needs of handicapped persons.

IV. Future plans and needs

The current study of the future of the School of Home Economics will determine the focus for future development of this department as well as for the rest of the School. The Department firmly believes that its subject matter contributions have much to contribute to future development of the School and its graduates and to the people of the state. In order to make even minimal impact, additional resources in personnel must be added. The present division of responsibility to undergraduate teaching and to Extension work is physically and emotionally wearing and results in unsatisfactory responses to both legitimate demands. Therefore, if the Department is to survive in a viable form, reorganization with additional resources must come. The Department wants to improve and expand its offerings, and welcomes the opportunity.

DEPARTMENT OF NUTRITION AND FOOD

Annual Report, July 1, 1969 - June 30, 1970

Submitted by: Dr. Mark H. Bert, Head

1. Faculty publications, research grants, research projects and other professional activities.

Publications

Lee, C.J., E.M. Rust and E.F. Reber. Acceptability of foods containing a bulking agent. J. Amer. Dietet. Assoc., 54 (1969) 210.

Lojkin, Mary E. Tryptophan and nitrogen metabolism and pregnancy of the rat as affected by dietary supplementation with leucine and with amino acid mixtures. J. Nutrition, 100 (1970) 51.

Manuscripts for publication

Raheja, K.L., E.F. Reber and M.H. Bert. Effect of dicumarol and testosterone in rats. This manuscript on blood coagulation was submitted for publication in Proceedings of the Society for Experimental Biology and Medicine.

Bert, M.H., E.F. Reber and B.D. Punekar. Effect of radiation pasteurization and cooking on the protein quality of chicken breasts. Manuscript to be submitted by June 15, 1970, for publication in Journal of the American Dietetic Association.

Punekar, B.D., M.H. Bert and E.F. Reber. Combined effects of radiation sterilization, cooking, and methionine supplementation on beef protein quality and beef fat metabolism. Manuscript to be submitted by June 15, 1970, for publication in Journal of Nutrition.

Bert, M.H., G. Kuo, M.L. Liu and E.F. Reber. Effect of radiation pasteurization on the protein quality of clams and on thiaminase activity in clams. Manuscript to be submitted by June 30, 1970, for publication in Journal of Food Science.

Contribution to national scientific meeting

Bert, M.H., G. Kuo, M.C. Liu and E.F. Reber. Effect of radiation pasteurization on the protein quality of clams and on thiaminase activity in clams. Fed. Proc., 29, No. 2 (1970) 762.

Research Grants

Research under faculty research grant FR-N13-69(1) has been progressing; it deals with effect of dietary factors on cholesterolemia; it started in March 1969 and will be completed by August 31, 1970, by Dr. K. Padma Umapathy.

Grant FR-N13-70(1) was awarded last October to Miss Dorothy Davis in support of the research to be conducted during her sabbatical leave in the Dept. of Foods and Nutrition, Purdue University, in the spring of 1970.

Research grant UI-00148-06 (Health Significance of Radiolytic Products in Foods) was funded in January, 1970, by Consumer Protection and Environmental Health Service, Public Health Service, Department of Health, Education and Welfare. The proposal for this investigation was jointly prepared by Dr. W.W. Nawar of the Dept. of Food Science and Technology and Dr. M.H. Bert. Dr. Nawar is the principal investigator and is in charge of the preparation of the radiolytic products. Dr. Bert is in charge of the evaluation of the effect of feeding these products to experimental animals. This grant supports a research assistantship which was awarded in January, 1970, to a Ph.D. candidate who was admitted to the Graduate Program of the Department of Nutrition and Food because this grant was funded and because he was highly qualified to participate in this investigation.

Other professional activities

Two Search Committees to recommend candidates for two vacant positions in this Department have continued to seek and bring such candidates for interviews.

The entire faculty of this Dept. has contributed to the revision of undergraduate curriculums in this Dept. and other Departments in the School of Home Economics.

The Allied Health Professions Improvement Program Project AHI-69-589(C) Dietetics (Bert) for Basic Improvement of Teaching of Dietetics and Institutional Administration was in operation from April 15, 1969, thru April 14, 1970. The application for continuing this project was approved; thus this project is being continued thru April 14, 1971. Dr. Bert is

director of this project. This project has made it possible to bring about a basic improvement of teaching of Dietetics and Institutional Administration in this Department (1) by purchasing the best in audio-visual equipment, laboratory equipment, reference books and leaflets, (2) by paying a portion of the salary of a visiting lecturer (half-time), (3) by paying the travel expenses of faculty members whose trips are of direct benefit to this project, (4) by paying consultants who advise on how to improve our curriculum in Dietetics and Institutional Administration and our classroom and laboratory facilities.

Dr. Bert was promoted to the rank of Associate Professor. He attended the 17th Annual Food Management Seminar on UMass campus last January, and the 54th Annual Meeting of the Federation of American Societies for Experimental Biology in Atlantic City, N.J., where he presented a research paper and interviewed candidates for vacant positions in this Department last April. He was a guest lecturer in graduate course Health Education #886521 offered by State College at Westfield, Mass., last fall. He served on the Program Planning Committee for a two-week training program for the first three Czechoslovakian scientists to enter the United States since the Soviet occupation of Czechoslovakia in August, 1968. These scientists were guests of our State Department. They visited this Department, the Dept. of Food Science and Technology and other Departments in the College of Agriculture. They also visited the Department of Nutrition at Harvard U. and the Dept. of Nutrition and Food Science at M.I.T. thru arrangements made by Dr. Bert. He served on the Faculty Senate, Graduate Council, Computer Committee, Advisory Committee of the Center for International Agricultural Studies (College of Agriculture), and Committee on Interdisciplinary Research in the Health Care Field (Graduate School). He served on the Undergraduate Curriculum Committee and the Graduate Committee of the School of Home Economics.

Miss Dorothy Davis attended the 5th International Congress of Dietetics and the 52nd American Dietetic Association Annual Meeting in Washington, D.C., last September, 1969, and the Conference on Fat Controlled Diets and Heart Disease in Westfield, Mass., last October. She spent the second semester on a sabbatical leave in the Dept. of Foods and Nutrition, Purdue University, to pursue research in the field of microwave cooking as it relates to food service at the institutional and home levels, and to engage in course work related to nutrition and food. She served on the University Scholarship Committee and the University Summer School Committee. She served on the Undergraduate Curriculum Committee and the Summer School Committee of the School of Home Economics.

Mrs. Ruth W. Holmes was appointed Visiting Lecturer, part-time, for the second semester.

Dr. Mary E. Lojkin served on the Graduate Committee and Personnel Committee of the School of Home Economics. She was appointed Associate Professor Emeritus upon her retirement last November 30.

Mrs. Jane F. McCullough attended: the 5th International Congress of Dietetics in Washington, D.C., September 1969; the Fall Conference of the Society for the Advancement of Food Service Research in Chicago, October, 1969; and the Spring Conference in New Orleans, April, 1970, and was program coordinator and responsible for editing of proceedings. She was President of the Massachusetts Food Service Educational Council and member of the committee for the 17th Annual Food Management Seminar held on this campus January 21, 22, 23, 1970. She was instrumental in obtaining the Tosi Scholarships and the Massachusetts Food Service Council award for the Department of Nutrition and Food. She participated as a lecturer in the Inter-Union Pre-Retirement Training Program under the Labor Relations Center, May, June, December, 1969, January, 1970. She participated in programs for two 9-week seminars on "Convenience Foods in Food Service Establishments" in Waltham, 1969 (September-November) and West Springfield, 1970 (February-April); these seminars were sponsored by the Cooperative Extension Program and the Massachusetts Food Service Educational Council. She served on the University Services Committee and the University Scholarship Committee. She served on the Scholarships and Awards Committee and the Publicity Committee of the School of Home Economics.

Miss Charlotte S. Pierce was appointed Visiting Lecturer, part-time, for the second semester.

Mrs. Dorothy M. Travnicek, Ph.D., was appointed Visiting Lecturer, part-time, for the second semester.

Dr. K. Padma Umapathy attended: Fifth International Congress of Dietetics in Washington, D.C., last September; Conference on Fat Controlled Diets and Heart Disease in Westfield, Mass., last October; Conference on Nutrition Status - Massachusetts Style, arranged by Massachusetts Dietetic Association, in Westfield, Mass., last April. On behalf of the Massachusetts Heart Association she delivered 2 lectures on the topic of "Diet and Heart Disease" in Palmer, Mass., last February and April. She served on the Scholarships and Awards Committee of the School of Home Economics.

Miss Harriet J. Wright was promoted to the rank of Professor last February. She received the Epsilon Sigma Phi award in "Recognition of Outstanding Achievement as an Extension Service Worker" last April. The citation accompanying this award reads:

> "Harriet Wright, your co-workers honor you for your leadership over the past 13 years in your specialty of Nutrition and Food and particularly for your guidance in the subject matter of the Expanded Food and Nutrition Program for the past 18 months. You hold high scholarship standards for yourself, and in turn, assist your county, co-workers, who are responsible for the subject matter, to have access to the best of materials and training. You have availed yourself of every opportunity to learn to know Extension's new clientele, the urban and rural

poor. Your friendly spirit has made members of the new community feel you care about their welfare and their betterment. Your co-workers look to you for your counsel and leadership."

This program deals with low-income families in 17 areas of Massachusetts; 175 non-professional women, called Extension Program Assistants, and 23 Home Economists are working with families and youth. She attended the American Public Health Association Meetings (Food and Nutrition Section) in Philadelphia last November. She was a guest lecturer for 2 lectures at Westfield State College, Westfield, Mass. (grad. course in health education), and 3 lectures at School of Nursing, UMass. (2 undergrad. courses). She served on the University Health Council and as secretary of the Special Extension Task Force on Food and Nutrition (College of Agriculture). She served on the Main Committee for the Study of the School of Home Economics, Personnel Committee of the School of Home Economics (secretary), Faculty Fund Committee of the School of Home Economics and Faculty Fund Committee of the Extension Division of the School of Home Economics. She served on the Nominating Committee of the Massachusetts Dietetics Association and on a State-wide Committee to consider the "Recommendations of the White House Conference on Food, Nutrition and Health" and their implications for Massachusetts.

2. Major accomplishments during the fiscal year 1969-70.

Undergraduate instruction

In the fall of 1969, 48 students were enrolled as majors in the Department; 56 students were enrolled in the fall of 1969 and in the fall of 1967. A total of 18 courses were taught in the period covering the 1968 Summer Session, the 1969 Fall Semester and the 1970 Spring Semester; these courses include 3 Problems courses, and 5 service courses for students majoring in other Departments. A total of 740 students were enrolled in these 18 courses.

The following 5 members of the Class of 1970 were granted American Dietetic Internship appointments for a fifth year of advanced training in American Dietetic Association approved internship programs in hospitals: Maryann E. Boland, Donolyn J. Hagelberg, Janet E. Howes, Carol A. LaMagdelaine, Linda A. Raynes (A.D.A. membership plus M.S. degree). The following 3 members of the Class of 1969 also received appointments after working for one year: Linda J. Barr, Barbara L. Epstein, Christine L. O'Hare. Mrs. McCullough was responsible for advising all senior students applying for these internships and for maintaining American Dietetic Association files in the Department.

Graduate Instruction

A total of 18 graduate students were enrolled as majors in this Department in the 1969-70 academic year. Five of them are Ph.D. candidates; they are Anne K. Dudleston, Carrie E. Johnson who holds a University Fellowship,

Boaz A. Mafarachisi who holds a Graduate Research Assistantship, Pitambar Padhi and Grace S.H. Shen. A total of 17, 15, and 14 graduate students were enrolled as majors in this Department in the 1968-69, 1967-68 and 1966-67 academic years, respectively. The Ph.D. program in this Department became operational in the fall of 1966. A total of 10 graduate courses were taught in the period covering the 1969 Summer Session, the 1969 Fall Semester and the 1970 Spring Semester; these courses include one Special Problems course, but exclude Master's Theses and Doctoral Dissertations. A total of 51 graduate students were enrolled in these 10 courses. Dr. Bert is Director of Graduate Studies in the Department.

Ph.D. Dissertation:

Morlang, Barbara L., "Nutritional study of 5th and 6th grade children in Roanoke, Virginia - Their eating behavior and physique as related to sex, age, and social and economic factors", September 1969.

M.S. Thesis:

Ford, Cynthia H., "The protein quality of mixtures of sewage-grown algae and soybean protein or fish flour and their effect on cholesterolemia", August 1969.

M.S. Special Problems:

Andrews, Eugenie E., "Microwave cookery of biscuits", May 1970.

Cappadona, Marie V., "Comparison of the nutrient content of canned and frozen convenience entrees with home-prepared standards", May 1970.

Hsu, Barbara H., "Nutrient intake of Fu-Jen University (Taiwan) students and quality of the protein and fat they consumed", May 1970.

Lee, Patrice, M.S., "Quality of the protein and adequacy of the diets consumed by Chinese students attending the University of Massachusetts at Amherst", May 1970.

Oral examinations to be taken by June 30, 1970:

Padhi, Pitamber, "Effects of dietary combinations of proteins, fats, carbohydrates, minerals and vitamins on serum cholesterol, total lipids, non-protein nitrogen, and transaminase activity", a Doctoral Dissertation.

Chen, Linda S.Y., "Quality of the protein and adequacy of the diets consumed by 4th grade pupils in Taipei, Taiwan", an M.S. Special Problem.

Mitchell, Florence R., "Dietary survey of married graduate students at the University of Massachusetts, Amherst, in the Spring of 1970", an M.S. Special Problem.

Williams, Jerrilyn H., "Changes in expressible fluid, palatability and appearance of refrigerated irradiated fish", an M.S. Special Problem.

An important addition was made to the equipment in the chemical laboratories of the Department: an explosion-proof fume hood for the fat-extraction apparatus was installed. The present set-up makes it possible to safely extract fat by means of solvents. Fat extractions will be carried out for instructional or research purposes such as in the work supported by grant UI-00148-06 mentioned above.

3. Future plans and needs.

Plans

This Department will pursue and complete the revision of its undergraduate curriculum and courses. Consultants will be brought to campus from Universities, the headquarters of the American Dietetic Association, and industry. This revision takes into account the increasing emphasis on socio-economic factors affecting the nutritional status of large sectors of our population; this Department is acutely aware of the important contribution it can make to the eradication of hunger and malnutrition. This revision also aims at increasing the usefulness of service courses this Department offers to students majoring in other Departments.

At the graduate level, this Department plans to continue to encourage its students to do research in areas which are closely related to the solution of the all-important problem of hunger and malnutrition. Efforts will be made to participate in interdisciplinary research in environmental quality and health problems.

Needs

This Department needs to fill two faculty positions which are necessary to achieve its aims in teaching and research. It needs more funds for classroom, laboratory and office supplies and expenses; more equipment for teaching and research; an adequate number of Graduate Teaching Assistants; more funds for faculty travel; more time for the preparation of applications for research grants which are essential to the maintenance of a vigorous graduate program and make it possible to obtain equipment for research as well as instructional purposes.

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ANNUAL REPORT

Department of Textiles, Clothing and Environmental Arts

July 1, 1969 - June 30, 1970

Submitted by: Sarah L. Hawes, Department Head

PROFESSIONAL ACTIVITIES

Faculty Publications, Research Grants, Research Projects and Other Professional Activities:

Publications:

Paston, Herbert S. - Collage is a Learning Medium, What's New In Home Economics, September 1969.

Paston, Herbert S. - Picturesque Statements, Christian Science Monitor, February 1970.

Paston, Herbert S. - Creative Display, What's New In Home Economics, February 1970.

Paston, Herbert S. - Paper--The Sometimes Neglected Art Material, Instructor Magazine, anticipated publication Spring 1970.

Paston, Herbert S. - Doctoral Thesis--"Teaching of Art", Columbia University, anticipated June 30, 1970.

Exhibits:

Coughlin, Joan H. - Painting exhibited at Golden Cod Gallery, Wellfleet, Cape Cod, July to September 1969

Coughlin, Joan H. - Smith College Purchase Exhibition, December 1969. Painting exhibited at Westfield State College Spring Arts Festival, April 1970.

Coughlin, Joan H. - Exhibition of Paintings at Leverett Craftsman and Artists Association Spring Invitational Exhibition, April 1970.

Paston, Herbert S. - Sculpture exhibited at Leverett Craftsman and Artist Association Spring Invitational Exhibition, April 1970.

Rainsford, Richard - Exhibited paintings at Woodstock Annual Art Fair. Won First and Third Prizes in Professional Class.

Rainsford, Richard - Exhibited painting at Connecticut Academy of Fine Arts, Wadsworth Atheneum, Hartford, Connecticut. Honorable mention (81 works selected from 389 entries) in addition to 2 First Prizes awarded; "Mine is a Large Family" by R. Rainsford was one of six works indicated as "outstanding".

Research Grants:

Davis, Virginia: Clothing Construction for Low-Income Women. Celanese Corporation - $4,000.00. To support a pilot project in clothing construction for low-income women. This will be developed and administered cooperatively with Hampden County Home Economics Extension Agents.

Research Project:

Davis, Virginia: Your Clothing $ - Shopping the Market. A self-contained "Packaged Program" on clothing economics -- a pilot research project being tested by Home Economics Extension Agents.

Feature Article:

Davis, Virginia: Program on "Dress and Decoration", Sunday Cape Cod Standard-Times, October 19, 1970. Text and photographs by Bill Smith. Full page feature article including five pictures.

Other Professional Activities:

The department was represented at the following professional meetings:

International Meeting of the Society of Education Through Art, New York, July 1969; R. Johnston, H. Paston.

National Art Education Association, Philadelphia, March 1970; R. Johnston, H. Paston. Mrs. Johnston Participated in a Seminar Panel on "Community Resources Enriching the Art Program".

Massachusetts Art Education Association Conference, Springfield, Mass., October 1969; R. Johnston, H. Paston.

Massachusetts Federation of Extension Workers; V. Davis, R. Johnston.

National Conference for Extension Clothing Specialists. Participated in Conference; V. Davis.

Regional and State Home Economics Association; (Staff).

National Home Economics Association, Cleveland, Ohio; S. Hawes.

Invitational: Symposium for teachers of textiles and clothing. Held at AATCC Technical Center, Research Triangle Park, North Carolina, June 29 - July 3, 1970; V. Davis.

Apparel Design Forum, School of Family Resources and Consumer Sciences, University of Wisconsin, Madison, Wisconsin, June 15 - 19, 1970; M. Randall.

Other Activities:

Appointed consultant to Furnishings Committee, Woodstock, Connecticut Historical Society; R. Rainsford.

Continued consulting for Furnishings Committee of Keeler Tavern Preservation Society, Ridgefield, Connecticut; R. Rainsford.

Speaker: Local Meeting of Omicron Nu, National Home Economics Honorary Society; Freshmen Students on Opportunities in Clothing, Textiles, and Environmental Arts; H. Paston, C. Porter.

On Sabbatical Leave, Spring Semester: Doing work at Michigan State University on Clothing Behavior; M.A. Niederpruem.

Community Service: 4-H Extension; M. Randall.

Faculty members of the department were represented on most School Committees and were actively involved in the following:

School:

1. School Study Committee - S. Hawes.
2. Dean's Executive Council - S. Hawes.
3. Personnel Committee - V. Davis, Chairman; H. Paston (November - June); M. Randall.
4. Undergraduate Curriculum Committee - S. Hawes, Chairman.
5. Home Economics Graduate Committee - M. Niederpruem (Fall); H. Paston (Spring).
6. Secretary for Faculty Meetings - C. Porter.
7. Secretary for Department Meetings - M. Randall.
8. Scholarship and Awards Committee - C. Porter, Chairman.
9. TCEA Department Student and Faculty Liaison Committee - C. Porter; V. Davis.

10. Faculty Search Committee and Review Committee on Promotions and Tenure - S. Hawes; C. Porter.

11. Faculty Fund Committee - M. Randall, Chairman.
12. Honor's Committee - S. Hawes
13. Publicity Committee - V. Davis; R. Johnston.
14. Summer School Committee - H. Paston.

University:

1. Senate - S. Hawes; C. Porter.
2. Chancellor's Interim Administrative Council - S. Hawes.
3. Committee on Committees - S. Hawes.
4. Discipline Board - S. Hawes.
5. University Affairs - S. Hawes.
6. Fine Arts Council - H. Paston.
7. Scholarship and Financial Aid - C. Porter (Spring).

MAJOR ACCOMPLISHMENTS:

The Department has concentrated on a self-evaluation of the role of Textiles, Clothing and the Environmental Arts and has developed a Statement of Philosophy to serve as a frame of reference for program innovations to meet the changing interests and needs of students and families in our rapidly changing society.

In conjunction with this self-evaluation, the curriculum of the Department has been liberalized by the elimination of 21 credit hours of required courses. These included foreign language and the Home Economics Core Courses which the School voted not to require of all students. The experiment of offering an alternative of substitute course work for the required Retailing Internship was elected by eight students and proved successful. This will be continued.

The longstanding recommendation of the students and department personnel to remove TCEA 276, History of Decorative Arts, from the seven-week Block Programming was supported by the Dean of the School and the 1/4 lectureship appointment assigned to this course for the Fall 1969 semester was renewed for Spring 1970. This course is now available on a regular scheduling basis and is proving to be very satisfactory. This course has universal appeal and should soon attract a large enrollment of non-major students. Mr. Richard Rainsford has conducted extensive research in developing, acquiring and cataloging a first-class slide collection for use in this course. He is also engaged in writing a book on the Decorative Arts.

The course names Apparel Design I and II, with revised descriptions, were approved. This is a major curriculum improvement which reflects the true creativity and design development of the courses previously identified as Clothing Construction courses.

Faculty in the Department has reviewed and revised course content and methods of presentation incorporating new and different aspects of subject matter, and developed new teaching materials needed to implement the changes.

The numerous curriculum changes which have occurred within the department, the School, other departments with which it has close affiliations, and in the total University program have been studied; the recommendations of Students and Student-Faculty Committees, and the results of course evaluations have been considered in the development of the following three departmental program options available to students:

a. concentration leading to retail executive internship;
b. concentration or breadth in textiles and/or clothing;
c. concentration in interior design and/or environmental arts.

The options are designed to stimulate interest in advanced study in the field but also to prepare students for immediate positions, if necessary.

Two courses were offered by the department during the Summer Session 1969. The limitations on budget influenced the department decision not to recommend any offerings in the 1970 Summer Session.

Dr. Marion A. Niederpruem was on Sabbatical Leave during the Spring 1970 semester and worked at M chigan State University during their Spring Quarter from mid-March to mid-June. Her "leave" was devoted to study in the area of the socio-psychological aspects of clothing, development of graduate courses with this emphasis, and development of a research project which can hopefully be funded. Her interest is shifting to the needs of low-income groups.

The freeze on faculty positions which was in operation during Summer 1969 was an inconvenience but was finally relaxed about five days before classes started. In a small and highly specialized department, this was vitally important and greatly appreciated.

The administration supported the recommendation by the department to restore to a full-time instructorship the position which had been segmented into 1/4 and 3/4 lectureships several years ago. This will permit strengthening the program and permit better advising of students.

The fine contributions of Mrs. Catharine Porter to the department were acknowledged by promotion from Instructor to Assistant Professor.

Mr. Herbert Paston expects to complete his Ed.D. degree by June, 1970.

The Extension Program:

The emphasis of the TCEA Extension Specialists included study series which were culturally, socially, economically and aesthetically oriented.

The study series included:

"American Dress and Decoration", a series of four classes, was presented in Worcester and Barnstable Counties.

"Clothing Culture", a series of five classes, was presented in Middlesex County.

"Spending Generation" was presented in Hampden and Berkshire County and to teachers in Eastern Massachusetts. The program in Berkshire County and included a one-half hour radio question and answer period.

"Home Heritage" was presented in Plymouth, Hampden, Middlesex, Norfolk and Berkshire Counties.

"Color and Design" was presented in Essex County.

It is anticipated that extension aides will be instructed in sectional sessions in Interior Design for residents in low-level to poor housing by Mrs. Johnston by June 30th.

Agent training and consumer consultation are continuing and important aspects of the TCEA Specialists responsibilities.

The 4-H program was supported by V. Davis who assumed major responsibility for the State Conference, including the Clothing Revue, Eastern States Exposition, and the preparation of literature for 4-H leaders and youth.

MAJOR NEEDS:

The major needs of the TCEA Department are personnel, physical space, and money.

Personnel:

Department Head - a person qualified to direct the undergraduate program, develop a graduate program, initiate research projects and seek out funds to support such projects.

One staff member in Textiles and Clothing to develop consumer economics aspect of program.

One additional staff member in Extension Clothing Area.

One full-time departmental secretary.

Physical Space:

The department has one environmental art stuio, one apparel design laboratory and one multi-purpose room which also doubles as a textile laboratory. This room is an open attic-type room which cannot be locked, equipment cannot be left out due to lack of security--it is far from the proper atmosphere for teaching textiles. It is comparable to the situation of teaching chemistry in a dormitory lounge. A textile laboratory, an additional environmental arts studio and an additional apparel design studio are needed.

The departmental courses are supported almost entirely on income from laboratory fees - not on support from the various budgetary accounts.

IN SUMMARY:

Five full-time resident faculty (one on leave one semester), two Extension faculty (each teaching one course per year), and a 1/4 and 3/4 lecturer assumed the following responsibilites for the resident program:

The department offered twenty-six TCEA Courses (46 sections), plus 10 Special Problems during the academic year. Most courses were flagged for preregistration which limits enrollment and others were over-subscribed. Students had to be evicted due to limited physical facilities and lack of faculty time. Many departmental courses are studio or laboratory courses which places great demands on the faculty time and physical facilities. Two courses were taught by Extension personnel, one staff member was on leave one semester, the department head who is on an academic year appointment carried ten credit hours of course work plus six 3-credit problems, multiple and active University, School and departmental committee assignments, 40 advisees, in addition to departmental administrative responsibilities. The 1/3 time service of a secretary alloted to the department and located in the office of the Dean did little to relieve the pressure. This secretary serves six faculty members with course related typing and with the confidential department material.

Because of the demands on the department, it has been considered unwise to progress into a graduate program. However, this poses problems related to program development and securing teaching assistants.

The faculty of this department are scheduled so heavily that there is little or no time for creative planning or professional improvement.

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